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ORDNANCE

GAZETTEER OF SCOTLAND:

A SURVEY OF SCOTTISH TOPOGRAPHY,

Statistical, Biographical, and Historical.

EDITED BY

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FIRTH OF FORTH
GRANTON HARBOUR
GRANTON PIER
GRANTON
NEWHAVEN
TRINITY
LEITH
OLD DOCKS
VICTORIA DOCK
ALBERT DOCK
LEITH LINKS
Royal Botanic Gardens
Arboretum
Warriston Cemetery
Rosebank Cemetery
Eastern Cemetery
Public Park
STOCKBRIDGE
ROYAL GYMNASIUM
CALTON HILL
HOLYROOD PALACE
QUEENS PARK
Bells Mills
Dean Cemetery
Water of Leith
Roseburn
THE MEADOWS
BRUNTSFIELD LINKS
MERCHISTON
WHITEHOUSE
MORNINGSIDE
GRANGE
NEWINGTON
Grange Cemetery
Blackford Hill Sta.
PLAN OF
EDINBURGH
Scale of ½ Mile
ORDNANCE GAZETTEER MAPS OF SCOTLAND
J. Bartholomew Edin.

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hath now of late built in Pettie called Castell Stuart, they drive away his servants from thence, and doe possess themselves of all the Earl of Moray his rents in Pettie.' This date is also borne out by the style of the building, a large high-roofed structure of several stories, with the great hall and principal rooms in the upper part. In front there is a square projecting tower at each end. That to the W, which contains the main staircase, seems somewhat older than the rest of the building. Formerly the castle was surrounded by a fine park and an orchard noted for its greens; but the trees were all cut down about 1835, the park ploughed up, and the roof of the building removed, so that had not the proprietor's attention been called to it the whole would soon have been a ruin. It was then repaired, and is now used as a shooting-box. Lying close to the clan grounds and in possession of the Earls of Moray, whom the Highlanders looked on as foes, Petty was much exposed to inroads for plunder. One such attack has been already noticed, and other two that occurred early in the 16th century are known as the 'Herschips of Petty.' The first was in 1502, when Sir James Dunbar of Cumnock, and his brother, David Dunbar of Durris, 'and thar complicis spulyet the landis of Petty and Geddes,' as well as of 'Halhill, the Fischertone and Hurlehurst,' though for what reason does not seem certain. Elizabeth, the daughter of Sir James Dunbar, was married to John Ogilvie of Strathnairn, who resided at Halhill Castle (which is by some supposed to have stood on the site of the present Castle Stuart, but by others is placed, with more probability, on the rising ground near the centre of the sea coast of the parish, at the school), which was, in 1513, the scene of the second herschip of Petty, the leaders of the plunderers on this occasion being the captain of Clan Mackintosh and Rose of Kilravock. Behind Castle Stuart is the church of Petty, and on the bank to the W of it are two large tumuli or moat hills. In the churchyard many of the chiefs of Mackintosh lie buried, and the procession at the funeral of Lachlan Mackintosh, who died in 1731, reached from Dalcross Castle to the churchyard, a distance by road of about 4 miles. In the Bay of Petty close at hand is the famous boulder known as 'the travelled stone of Petty.' It is from 6 to 7 feet long, from 5 to 6 feet wide, and about 6 feet high, and with a projecting ledge all round it near the lower side. It originally served as a march stone between the properties of the Earl of Moray and Forbes of Culloden, but was, during the month of February 1799, moved about 260 yards to the WNW. A severe frost during that month had caused an accumulation of about 18 inches of ice over most of the bay, and this, during the night of the 19th, was capable of lifting the mass of stone so as to allow it to be floated by the tide, aided by a powerful gale of wind, to its present position. (See a paper by Sir Thomas Dick Lauder in the *Memoirs of the Wernerian Society*, vol. iii.) Anciently in the possession of the powerful northern family of De Moravia, the barony of Petty passed into the possession of the Earls of Moray till Archibald Douglas was forfeited in 1455, when it fell into the hands of the Crown. It was granted to Ogilvie of Findlater, who again disponed his interest to the Earl of Moray. The parish is traversed by the main road from Inverness to Nairn with a branch passing off at Newton near the SW end, and leading through the village of Campbeltown to the ferry at Fort George. The cross road from the SW end of Flemington Loch to Fort George is a portion of one of General Wade's military roads, and there are a number of good district roads. Railway communication is obtained by the Forres and Inverness section of the Highland Railway system which passes through the centre of the parish from NE to SW with stations at Dalcross (6¾ miles from Inverness) and at Fort George (9½ miles from Inverness and 3 from the Fort itself).

The parish contains a village of the same name near the church, and two small hamlets. Petty is in the presbytery of Inverness and synod of Moray, and is formed of the old parishes of Petyn and Bracholy, which

were united after the Reformation, and the original church was dedicated to St Columba, and is said to have occupied the site of a Culdee cell. The present church, built in 1839, includes a portion of a previous church. The living is worth £384. The Free church is on the side of the road from Inverness to Forres, 1¾ mile E by N of the parish church. Two new public schools, East and West, with respective accommodation for 140 and 150 children, had (1884) an average attendance of 86 and 63, and grants of £61, 2s. and £30, 12s. 4d. The Earl of Moray is the largest proprietor, and three others hold each an annual value of £500 and upwards, one holds between £500 and £100, and one between £50 and £20. Valuation (1884) for the Inverness-shire section, £8164, 4s. 6d., and for the Nairnshire section £202, 12s. The reach of the Highland railway in the former is valued at £2026, and in the latter at £89. Pop. (1755) 1643, (1801) 1585, (1831) 1826, (1861) 1602, (1871) 1496, (1881) 1531, of whom 794 were females, and 807 Gaelic-speaking; while 1488 were in Inverness-shire, and 43 in Nairnshire.—*Ord. Sur.*, sh. 84, 1876.

Pettycur. See KINGHORN.

Phantassie, an estate, with a mansion, in Prestonkirk parish, Haddingtonshire, ½ mile E by N of East Linton. It was the birthplace of George Rennie (1749-1828), the eminent agriculturist, and also of his brother John (1761-1821), the celebrated engineer. Its present owner, Thomas Shairp Mitchell-Innes, Esq. (b. 1813), holds 749 acres in the shire, valued at £2483 per annum.—*Ord. Sur.*, sh. 33, 1863.

Pharay, North, an island of Stronsay and Eday parish, Orkney, 7 furlongs W of Eday island, from which it is separated by the Sound of Pharay. It has an utmost length, from N by W to S by E, of 1¼ mile; and an utmost breadth of ½ mile. A pastoral islet, the Holm of Pharay (6½ × 2 furl.), ¼ mile to the N, is separated from it by Lavey Sound. Pop. (1841) 67, (1861) 82, (1871) 83, (1881) 72.

Pharay, South, an island of Walls and Flotta parish, Orkney, 4½ furlongs E of Hoy, 3¼ NW of Flotta, and 8½ S of Cava. It has an utmost length from NNW to SSE of 1⅝ mile, an utmost width of 7½ furlongs, and a maximum altitude of 139 feet above sea-level. Pop. (1841) 55, (1861) 45, (1871) 53, (1881) 68.

Philiphaugh, a mansion in Selkirk parish, Selkirkshire, near the left bank of Yarrow Water, a little above its influx to the Ettrick, 3 miles WSW of Selkirk town. In 1528 Patrick Murray of Falahill, the grandson of the 'Outlaw Murray,' obtained a charter of the lands of Philiphaugh; and his descendant, Sir John Forbes Pringle Murray, seventh Bart. since 1704 (b. 1842; suc. 1882), holds 2799 acres, valued at £2335 per annum. The flat diluvial plain between the house and the town is celebrated as the scene of Montrose's defeat by Leslie, on the morning of 13 Sept. 1645. Ettrick Water, just after the Yarrow's confluence, makes a gentle curve to the right, and, stealing along the base of a lofty bank on whose summit, at one point, stands the town of Selkirk, leaves on its left bank a beautiful haugh, 400 to 500 feet above sea-level, which extends north-eastward from a copse-clad eminence called Harehead Hill (1046 feet), to some high ground on the margin of the stream, a little below Selkirk. This plain is Philiphaugh; it is about 1½ mile in length, and ¼ mile in mean breadth; and being defended, on the one side, by the river with its bulwark-fashioned bank, and overhung, on the other, by a stretch of bold uplands, which intervene between the Yarrow and the Tweed, it possesses, naturally, and on a grand scale, many of the securities and conveniences which were desiderated by the Romans in their camps. Montrose, after he had won six splendid victories over the Covenanters, was on his march southward to pour his conquering troops upon England, when Philiphaugh invited him to repose, and wooed him to destruction. Observing the advantageousness of the ground, he strengthened it with some trenches, and posted upon it his infantry, amounting to 1000 men; and, seeing how

near it stood to the town of Selkirk, he there quartered his 500 horse, and courted a night's freedom from a soldier's care. General Leslie, with his sturdy and high-spirited Covenanters, arrived at Melrose on the evening of Montrose's bivouac; and, favoured next morning by a thick mist, he reached Philiphaugh, and was in position for the onslaught, before being descried by a single scout. Montrose was apprised of danger only by the yell which followed the tiger's leaping upon his prey; he knew nothing of Leslie's vicinity till the rattle of musketry announced his activity in the encampment; and when he reached the scene of conflict, he beheld his army dispersed and fleeing in irretrievable panic and confusion. After making a bold stand, a desperate but unavailing attempt to recover his lost fortunes of the hour, he cut his way through a body of Leslie's troops, fled up Yarrow and over the wild and lofty mountain-path of Minchmoor, and stopped not till he arrived at Traquair, 16 miles from the scene of action. His defeat produced at once conclusive advantages to the Covenanters, and ruin to the hapless cause of Charles I. in Scotland. Upwards of a mile SW of the present farm-stead of Philiphaugh, and overhanging the Yarrow immediately above its confluence with the Ettrick, there are still traces of an entrenchment thrown up by Montrose. Two miles farther up the Yarrow, close to the ruin of Newark Castle, is a field called Slain-man's-lee, in which tradition says the Covenanters, a day or two after the fight, put many of their prisoners to death. In Selkirk the house is still standing which was occupied by Montrose on the night of his ill-judged security. And in the centre of the battlefield is a small obelisk, inscribed, 'To the memory of the Covenanters who fought and fell on the field of Philiphaugh, and won the battle there, 1645.'—*Ord. Sur.*, sh. 25, 1865.

Philipstoun, a village in the W of Abercorn parish, Linlithgowshire, 3 miles E by N of Linlithgow. To the NE of it is Philipstoun House, the residence of Lieut.-Col. James Hare of CALDER HALL (b. 1836; suc. 1878), the Earl of Hopetoun's factor, who holds 2373 acres in Midlothian, valued at £4181 per annum.—*Ord. Sur.*, sh. 32, 1857.

Philorth, a mansion in Fraserburgh parish, NE Aberdeenshire, 2 miles S by E of the town. What looks to be the oldest part of it bears date 1666; but additions and alterations have been made from time to time, the latest in 1874. There are some fine old hardwood trees around the house, and extensive plantations have been formed in the course of the last hundred years. The estate has belonged to the Frasers since the latter half of the 14th century; and a prophecy, falsely ascribed to Thomas the Rhymer, predicts that—

> 'As lang as there's a Cock o' the North,
> There 'll be a Fraser in Philorth.'

In 1669 Sir Alexander Fraser of Philorth succeeded his cousin, Alexander Abernethy, as tenth Lord Saltoun; and his descendant, Alexander Fraser, present and seventeenth Baron Saltoun since 1445 (b. 1820; suc. 1853), holds 10,082 acres in the shire, valued at £10,967 per annum. See FRASERBURGH and SALTON.—*Ord. Sur.*, sh. 97, 1876.

Phladda. See FLADDA.

Physgill, a good old mansion, with fine plantations and some grand old trees, in GLASSERTON parish, SE Wigtownshire, 2 miles SSW of Whithorn.

Picts' Work Ditch. See CATRAIL.

Piehills, a village in Ruthwell parish, Dumfriesshire, 9½ miles WNW of Annan.

Pierceton. See PERCETON.

Piershill Barracks. See JOCK'S LODGE.

Pike Fell. See EWES.

Piltanton Burn. See LESWALT.

Pinkie, an estate, with a mansion, in Inveresk parish, Edinburghshire, at the E end of the town of Musselburgh. Forming two sides of a quadrangle, Pinkie House is a château-like building of various dates. Its older part, a massive square tower, with picturesque corner turrets, was originally a country seat of the Abbots of DUNFERMLINE; and, so passing to Alexander Seton, first Earl of Dunfermline, by him was enlarged, repaired, and decorated in 1613. One may notice its noble 'Painted Gallery,' 96 feet long, whose roof is adorned with heraldic and mythological emblems in blue and red and gold; the so-called 'King's Room;' and a lofty chamber, its roof decorated with pendants, which is said to have been occupied by Prince Charles Edward on the night after Prestonpans. Among numerous portraits is one by Jameson of Sir Thomas Hope of Craighall. In front of the house is a lofty stone fountain of fine and elaborate architecture; and around it are beautiful old-fashioned gardens. The Princes Henry and Charles are said to have spent three years of their boyhood at Pinkie House. On the death of the fourth and last Earl of Dunfermline (1694), the estate passed to the first Marquess of Tweeddale, and by the sixth Marquess was sold in 1778 to Sir Archibald Hope of Craighall, Bart., whose descendant, Sir John David Hope, thirteenth Bart. since 1628 (b. 1809; suc. 1883), holds 961 acres in the shire, valued at £3437 per annum. See vol. iv. of Billings' *Baronial Antiquities of Scotland* (1852), and vol. ii. of Small's *Castles and Mansions of the Lothians* (1883).

The battle of Pinkie arose out of an invasion of Scotland, in 1547, during the infancy of Queen Mary, by the Protector Somerset. News having arrived that an English army of 12,000 foot and 2000 horse was at Newcastle on its march to Scotland, a Scottish army of 30,000 men was hastily mustered to take post on Edmonston Edge, 2½ miles SW of Musselburgh, to stop the invaders and protect the capital. Somerset, on coming up, was supported by a fleet of 30 ships of war, and 30 transports laden with ammunition and provisions, lying in the firth opposite the mouth of the Esk; and, drawing up his army on Falside Brae, 1½ mile E of Musselburgh, he extended his right over the grounds of Walliford and Drummore towards the sea. The Scottish position being too strong to admit of his assailing it, he firmly maintained his post, and awaited an attack. A body of the Scotch horse, 1500 strong, rushed down upon him on the 9th of September, at Edgebucklin Brae, at the E end of Musselburgh links, and threw away a great part of their strength in a useless skirmish; and all the rest of the Scottish army, under delusive notions on the part of their leaders, left their strong position next day, and defiled along the old bridge of Musselburgh, to close with the English on the E bank of the Esk. As they passed the bridge, and marched up the hill of Inveresk on the W side of the church, they were galled by cannon-shot from the English galleys in the bay, and lost the Master of Graham, eldest son of the first Earl of Montrose, and many of his followers. Descending eastward down a slope, they began to be sheltered from the shot, and, passing through the How Mire, which lies at the foot of the slope, and was then a morass, though now drained and cultivated, they saw the English army and the battlefield immediately before them, on a gently hanging plain which recedes from the How to the base of Carberry Hill and Falside Brae. The conflict which followed was tremendous, but had too many details, and is too well-known, to admit or to need minute narration. After four hours' sternly debated and general conflict, during which the Scots won achievements, but could not profit by them for want of sufficient horse, and the English could make no impression with their cavalry on the hedges of pointed spears which enclosed the antagonist foot battalions, the van of the Scots was somewhat driven in by a concentrated attack, and a body of Highlanders, who had forgotten their duty to plunder the bodies of the slain, mistook the retrograde movement for flight, flung down their arms, took to their heels, infected the Lowlanders with their panic, and drew the whole army after them in an indiscriminate race. The Scots ran towards the coast, towards Dalkeith, and towards Edinburgh; and in each direction they were hotly pursued by the English, and hewn down in vast numbers. 'With blode and slaughter of

ye enemie,' says Patten, 'this chase was continued v miles in length westward fro the place of their standinge, which was in ye fallow feldes of Undreske, untille Edinborowe parke, and well nigh to the gates of the toune itself, and unto Lyeth; and in breadth nie IIII mile from the fryth sandes up unto Daketh southwarde: in all whiche space the dead bodies lay as thik as a man may meette cattell grasing in a full plenished pasture. They ryvere ran al red with blode; soo that in the same chase wear counted, as well by sum of our men that sumwhat diligently did maike it, as by sum of them takē prisoners that very much did lament it, to have been slayne above XIII thousande. In all thys cumpos of grounde, what with weapons, armes, handes, legges, heddes, blode, and dead bodyes, their flight mought have easily been tracted to every of their III refuges.' Another account—quite sufficiently exaggerated—states the loss of the Scots in killed at 10,000, and that of the English at not 200.—*Ord. Sur.*, sh. 32, 1857.

Pinmore, a mansion in Colmonell parish, Ayrshire, 6 miles NE of Colmonell village, and near Pinmore station on the Girvan and Portpatrick railway (1876), this being 5 miles S by E of Girvan. Seated on a rising-ground, at one of the loveliest bends of the river Stinchar, and surrounded by beautifully wooded hills, it was a Scottish Baronial edifice of the 16th and 17th centuries; and, destroyed by fire in 1876, it was next year restored in a similar style of architecture. Its owner, Hugh Hamilton, Esq. (b. 1828; suc. 1836), holds 8441 acres in the shire, valued at £3833 per annum.—*Ord. Sur.*, sh. 7, 1863. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Pinwherry. See COLMONELL.

Piper's Grave. See DEWAR.

Piper's Heugh. See STEVENSTON.

Pirn, an estate, with a mansion, in Stow parish, Edinburghshire, on the right bank of Gala Water, 3 miles NNW of Stow village. Remains of a Roman camp are at Pirntaiton, 2 miles further NNW, near Fountainhall station.—*Ord. Sur.*, sh. 25, 1865.

Pitbladdo, an estate, with a mansion, in Cupar parish, Fife, 2 miles NNW of the town.

Pitcairlie, an estate, with a mansion, in Newburgh parish, Fife, 2½ miles N of Auchtermuchty. Its owner, Robert Cathcart, Esq. (b. 1833; suc. 1857), holds 1050 acres in the shire, valued at £1643 per annum.—*Ord. Sur.*, sh. 48, 1868.

Pitcairn (Gael. *pitht-a-chairn*, 'hollow of the cairn') or **Pitcairngreen,** a village in Redgorton parish, Perthshire, near the left bank of the Almond, 1½ mile N of Almondbank station, and 4½ miles by road NW of Perth. Founded towards the close of last century on the estate of Lord Lynedoch, and advantageously situated for water power, it was predicted, in a poem by Mrs Cowley, to become a rival to Manchester, but has long ceased, except for being associated with places near it in the works of a factory and two bleaching greens, to give promise of reaching any high destiny. Pitcairnfield, Bridgeton of Pitcairn, Cromwell Park, and Woodend are villages near it; and Pitcairnfield has bleaching works, Cromwell Park has bleaching works and a factory, Bridgeton of Pitcairn has a U.P. church, and Pitcairngreen itself has a Free church and a public school. The U.P. church was built in 1797, and contains 450 sittings. Pop. (1861) 345, (1871) 339, (1881) 301.—*Ord. Sur.*, sh. 48, 1868.

Pitcairns, an estate, with a modern mansion, in Dunning parish, Perthshire, 5 furlongs ESE of Dunning village.

Pitcaithly, a place, with mineral wells, in Dunbarny parish, Perthshire, amid pleasant scenery, 1 mile SW of Bridge of Earn, and 4½ miles S of Perth. The wells have been known for their medicinal properties from time immemorial, but were not scientifically noticed till 1772. Five in number, they bear the name of the East, the West, the Spout, the Dunbarny, and the Southpark, and have all the same properties, differing from one another only in the quantity or proportions of their saline ingredients. They are esteemed useful in scrofulous, herpetic, and scorbutic complaints, and in cases of dyspepsia and general debility. A gallon of the water of one of them, according to analysis by Professor Thomson of Glasgow, contains 155·28 grains of chloride of calcium, 90·12 grains of common salt, 3·44 grains of chloride of magnesium, and 12·13 grains of sulphate of lime; while a gallon of another contains 168·58 grains of chloride of calcium, 117·84 grains of common salt, 4·16 grains of chloride of magnesium, and 25·92 grains of sulphate of lime. A large lodging-house, for the accommodation of visitors, stands beside the wells; but Bridge of Earn is the favourite lodging place of visitors, and is daily supplied with water from the wells for their use.—*Ord. Sur.*, sh. 48, 1868.

Pitcaple, a village and a mansion in Chapel-of-Garioch parish, Aberdeenshire. The village standing near the right bank of the Ury, has a station on the Great North of Scotland railway, ¾ mile WNW of Inveramsay Junction, 5 miles NW of Inverurie, and 21¼ NW of Aberdeen, under which it has a post office, with money order, savings' bank, and telegraph departments. The mansion, Pitcaple Castle, stands in the vicinity of the village between the railway and the Ury, and is partly an ancient edifice, which was in ruins a hundred years ago, but was restored from designs by W. Burn about 1830, and again underwent extensive repairs in 1873. It is notable for the detention in it of the Marquis of Montrose on his way as a prisoner to Edinburgh, and for visits to it by James IV., Queen Mary, and Charles II. Its owner, Henry Lumsden, Esq. (b. 1825; suc. 1859), holds 1410 acres in the shire, valued at £1681 per annum.—*Ord. Sur.*, sh. 76, 1874.

Pitcastle, a modern mansion in Logierait parish, Perthshire, near the left bank of the Tay, 5½ miles W by N of Ballinluig Junction.

Pitcorthie, a mansion in Carnbee parish, E Fife, 1¼ mile ENE of Colinsburgh.

Pitcruvie. See BALCRUVIE.

Pitcullo, an estate, with a mansion, in Leuchars parish, Fife, 4½ miles NNE of Cupar.

Pitcur, an estate, with a village and a ruined castle, in Kettins parish, Forfarshire. The village stands at the foot of the Sidlaw Hills, near the boundary with Perthshire, 3 miles SE of Coupar-Angus, and is sometimes called Ford of Pitcur. The ruined castle was the ancient baronial seat of the Hallyburtons, who acquired the barony of Pitcur in 1432; and the estate was sold in 1880 for £235,000 to the late Graham Menzies, Esq., of the Caledonian Distillery, Edinburgh. See HALLYBURTON House.—*Ord. Sur.*, sh. 48, 1868.

Piteadie Castle. See KINGHORN.

Pitempton, a village in Mains and Strathmartine parish, Forfarshire, 3 miles NNW of Dundee.

Pitferrane. See PITFIRRANE.

Pitfichie Castle, a roofless ruin in Monymusk parish, Aberdeenshire, 1¾ mile NNW of Monymusk station. It belonged, with a small estate around it, to the family of General Hurry, who figured in the times of the Covenanters; and it passed to the Forbes family, proprietors of the Monymusk estate.

Pitfirrane, a mansion in Dunfermline parish, Fife, amid a fine park, 2¼ miles WSW of Dunfermline town. The estate belonged to the Halketts from 1399 to 1877, when Sir Peter Arthur Halkett, eighth Bart. since 1697, sold it, with Keavil, for £132,500 to Lawrence Dalgleish, Esq.—*Ord. Sur.*, sh. 40, 1867.

Pitfour, an estate, with a mansion, in Old DEER parish, Aberdeenshire, 2 miles W by N of Mintlaw. The mansion is a large square building, and the park and policies are of great beauty, £80,000 having been spent on improvements by the late Admiral Ferguson, whose son, George Arthur Ferguson, Esq. (b. 1835; suc. 1867), holds 12,305 acres in the shire, valued at £10,492 per annum.—*Ord. Sur.*, sh. 87, 1876.

Pitfour Castle, a mansion in St Madoes parish, Perthshire, 7 furlongs S by E of Glencarse station, this being 6 miles E by S of Perth. Built by the present proprietor's great-grandfather, and enlarged by his father,

it is a spacious quadrangular structure, standing on an artificial terrace, and surrounded by beautiful grounds. Its owner, Sir Jas. Thos. Stewart-Richardson, fourteenth Bart. since 1630 (b. 1840; suc. 1881), holds 1147 acres in the shire, valued at £4817 per annum.—*Ord. Sur.*, sh. 48, 1868.

Pitheavlis. See PITTHEAVLIS.

Pitlochrie, a prosperous village in Moulin parish, Perthshire, is situated on the left bank of the river Tummel, and has a station on the Highland railway, 6¾ miles SE of Blair Athole and 12¾ NNW of Dunkeld. Partly from its position, in the midst of and near most romantic and picturesqne spots in Highland scenery, and partly from its healthy situation and salubrious climate, the village annually attracts a large number of tourists, visitors, and invalids. Its development, which, as the census returns show, has been considerable, is entirely due to its two qualifications of picturesque situation and healthy climate. In the immediate vicinity are BEN VRACKIE (2757 feet), the pretty little waterfall, known as the BLACK SPOUT, the village and castle of MOULIN, the Falls of TUMMEL, the junction of the Tummel and the Garry, the Bridge of Cluny, and the Pass of KILLIECRANKIE; while only a few miles off are BLAIR ATHOLE, Falls of BRUAR, Loch Tummel, KIRKMICHAEL, ABERFELDY, and DUNKELD, and other celebrated spots. A considerable number of houses for letting purposes have been built of late years, and Pitlochrie has long ranked as a favourite summer resort. The most important provision for visitors was the erection of the hydropathic establishment.

The village consists mainly of one street, built along either side of General Wade's highroad between Dunkeld and Blair Athole, but at the little bridge which spans a small burn tributary to the Tummel near the centre of the village, another road leads uphill to one or two newer and shorter rows of houses. Till lately, Pitlochrie had no Established church nearer than Moulin, though services were conducted in the public school. But in September 1883, there was laid the foundation-stone of a new Norman Gothic church, which is estimated to cost £2000, and will accommodate 468 persons. A special feature in its interior arrangement is the position, in the tower, and immediately behind the pulpit, of a class-room, which, by the removal of a screen, will afford in summer, additional accommodation for 40 persons. The neat Free church, on the slope overlooking the main street, was built to supersede the older structure, raised at the Disruption in 1843, about a mile to the N, and afterwards used as a school. At the SW end of the village is the Gothic Episcopal church of the Holy Trinity (1858; 125 sittings), surrounded with a neatly laid-out garden. A Baptist church, with 300 sittings, was erected in 1884. The Athole hydropathic establishment is a very large and striking building, and occupies an elevated site to the S of the town, commanding a lovely and extensive view. It was built in 1875 at a cost of £50,000 or £60,000, and it is surrounded with tastefully laid-out grounds, extending to between 30 and 40 acres, and access is obtained to it by an avenue which gradually ascends from the lodge on the level of the public road. The public school occupies a building formerly belonging to the Established church.

Pitlochrie has a post office, with money order, savings' bank, and telegraph departments, branches of the Commercial and Union banks, the Bank of Scotland, and the National Security Savings' Bank, 17 insurance agencies, two hotels, besides a temperance lodging house. The railway station is both handsome and commodious; lawn tennis courts were opened in 1883; and a pretty fountain has been erected in the town to the memory of Colonel Butter, yr. of Faskally, who died in 1880.

Though at one time spoken of as a centre of trade for Perthshire, N of Strathtay, Pitlochrie has but little commerce; though the almanacs still record that there are fairs for cattle and horses on the Saturday before the first Wednesday of May, and on the third Wednesday (*o.s.*) of October; and for sheep on the third Tuesday of August. There are two small factories,—one of tweeds and one of chemicals; and there is some distillation of whisky, while the ordinary shops are numerous enough and fairly good. The village enjoys a supply of water through pipes, and is lighted by gas. Pop. (1841) 291, (1861) 334, (1871) 510, (1881) 777, of whom 410 were females and 255 Gaelic-speaking. Houses (1881) inhabited 151, vacant 15, building 6.

Though now possessing comfortable and elegant houses, Pitlochrie at no distant period was a mere rude Highland village, with only some two or three slated houses. Prince Charlie, on his way to Culloden, is said to have occupied what was at the time the mansion-house of the Pitlochrie property. The parochial registers, whose first entry is dated 1707, mention that owing to the presence of the rebel army in 1745-46, public worship was suspended for several Sundays. The modern prosperity of the place dates from about 1845, when the Queen visited Blair Castle. Sir James Clarke, the royal physician, was struck by the character of the air and climate of the place, and began to prescribe to his patients a residence at Pitlochrie. It is related that on one occasion one of the neighbouring landowners went to London to consult Sir James Clarke, and was assured of a cure if he spent some time at Pitlochrie or its neighbourhood! Sir James Simpson, of Edinburgh, was also convinced of the wholesomeness of the air of Pitlochrie.—*Ord. Sur.*, sh. 55, 1869.

Pitlour House, a mansion in Strathmiglo parish, Fife, 1¼ mile N by W of the village. Its owner, William Baillie Skene, Esq. (b. 1838; suc. 1866), holds 2878 acres in the shire, valued at £4219 per annum.—*Ord. Sur.*, sh. 40, 1867.

Pitmedden House, a modern mansion, with a square corner tower, in Dyce parish, Aberdeenshire, 2 miles NNW of Dyce Junction. Its owner, George Thompson, Esq. (b. 1804), Provost of Aberdeen 1847-50, and Liberal M.P. for that city 1852-57, holds 1308 acres in the shire, valued at £1671 per annum.—*Ord. Sur.*, sh. 77, 1873.

Pitmedden House, a commodious mansion of recent erection in Udny parish, Aberdeenshire, 3 miles NNW of Udny station. Its owner, Sir William Samuel Seton, ninth Bart. since 1684 (b. 1837; suc. 1884), holds 662 acres in the shire, valued at £997 per annum.—*Ord. Sur.*, sh. 77, 1873.

Pitmiddle, a village in Kinnaird parish, SE Perthshire, 3 miles WNW of Inchture.

Pitmilly, an estate, with a mansion, in Kingsbarns parish, Fife, 4½ miles NNW of Crail. Its owner, Lieut.-Col. Jas. Rt. Blackwell Monypenny (b. 1835; suc. 1881), holds 2034 acres in the shire, valued at £5699 per annum.—*Ord. Sur.*, sh. 49, 1865.

Pitmuies, a mansion in Kirkden parish, Forfarshire, ¼ mile S of Guthrie station. Its owner, Leonard Lyell, Esq. of KINNORDY, succeeded to the estate in 1876.—*Ord. Sur.*, sh. 57, 1868.

Pitnacree, an estate, with a mansion, in Logierait parish, Perthshire, near the left bank of the Tay, 4 miles W by N of Ballinluig Junction.

Pitreavie, an estate, with a mansion, in Dunfermline parish, Fife, 2¾ miles SE of Dunfermline town. It was acquired about 1615 by Sir Henry Wardlaw, chamberlain to Queen Anne of Denmark, whose son was created a Baronet in 1631. *His* grandson, Sir Henry Wardlaw, in 1696 married Lady Elizabeth Halkett (1677-1727), author of the pseudo-archaic ballad of *Hardyknute*, and, according to Dr Robert Chambers, of most of the historical Scottish ballads. The battle of Pitreavie or Inverkeithing was fought on the level ground to the S of Pitreavie House, Sunday, 20 July 1651. In it 6000 Cromwellians, under Overton and Lambert, defeated 4000 adherents of Charles II., under Brown and Holburn, the loss on the royalist side being 1600 killed and 1200 taken prisoners.—*Ord. Sur.*, sh. 32, 1857.

Pitrichie. See PITTRICHIE

Pitrodie. See KILSPINDIE and ERROL.

Pitscandly, an estate, with an old mansion, in Rescobie parish, Forfarshire, 2 miles NE of Forfar.

Pitscottie, a hamlet in Ceres parish, Fife, on the right bank of Ceres Burn, 1½ mile NE of Ceres village and 3 miles ESE of Cupar. It takes its name, signifying the 'little hollow,' from its position between two confronting rising-grounds at the entrance to Dura Den; and two flax spinning-mills were erected at it in 1827. A 'countrie hous covered with strae and ried,' which stood on a small adjoining plateau, now occupied by the modern farmstead of Pitscottie, was the residence of Robert Lindsay, author of the quaint *Chronicles of Scotland from* 1436 *to* 1565. Pitscottie Moor, in the immediate neighbourhood, was a frequent meeting-place of the Covenanters for field preachings; and is named in a decree of 1671 against certain ousted ministers.—*Ord. Sur.*, sh. 41, 1857.

Pitsligo, a coast parish of Buchan, N Aberdeenshire, containing the fishing villages of ROSEHEARTY and PITULLIE, or Sandhaven, 4½ and 2¾ miles W by N of Fraserburgh. It is bounded N by the Moray Firth, E by Fraserburgh, S by Tyrie, and SW and W by Aberdour. Its utmost length, from E to W, is 3¼ miles; its utmost breadth, from N to S, is likewise 3¼ miles; and its area is 4891$\frac{7}{10}$ acres, of which 247½ are foreshore, and 3¾ water. The coast, 4½ miles in extent, to the E of Rosehearty is partly sandy, partly low shelving rocks; but westward rises boldly from the firth to a height at Braco Park of 151 feet above sea-level. Inland the surface attains 130 feet at Hillhead, 215 near the parish church, and 259 near the Mains of Ardlaw at the SW boundary. The principal rocks are sandstone, clay-slate, and limestone; and the soil, for the most part light, is very diversified, and ranges on almost every farm from clay or loam to light mould or reclaimed moss. Less than 20 acres are under wood; and the rest of the parish, with small exception, is all in tillage. The fine old ruin of Pitsligo Castle stands ½ mile SSE of Rosehearty village. Its oldest portion, the S tower or keep, was built in 1424, and measuring 80 by 36 feet, with walls 9 feet in thickness, was 114 feet high. Later parts of the building, which formed a hollow quadrangle, bear the dates 1577, 1663, and 1666. The extensive gardens still yield very fine apples. In 1633 Alexander Forbes was created Baron Forbes of Pitsligo—a title forfeited by his great-grandson, Alexander (1678-1762), for his share in the '45, and now claimed by the eldest son of Lord Clinton (see FETTERCAIRN) and two others. Pitullie Castle, ½ mile to the E, is also a ruin, bearing the dates 1651, 1674, and 1727. It was probably built by the Saltouns, and enlarged by the Cumines. A number of cairns have all but disappeared. Disjoined from Aberdour in 1633, Pitsligo had for its first minister the celebrated Covenanter, Andrew Cant (1584-1663), who soon, however, was transferred to Newbattle. It is in the presbytery of Deer and the synod of Aberdeen; the living is worth £252. The parish church, 1 mile S by E of Rosehearty, from its conspicuous position is sometimes called the 'Visible Kirk.' It was built by the first Lord Pitsligo in 1630-34, and, as repaired in 1836, contains 504 sittings. The belfry and the carved woodwork of the Forbes aisle, both of Dutch workmanship according to tradition, are much admired. There are also Sandhaven Established mission church (1882), Pitsligo Free church (1844) at Rosehearty, Sandhaven Free mission church (1881), and Rosehearty U.P. church (1799). Three public schools—Pitsligo, Pitullie, and Rosehearty—with respective accommodation for 186, 85, and 257 children, had (1884) an average attendance of 148, 74, and 227, and grants of £122, 2s., £53, 19s., and £198, 12s. 6d. Three proprietors hold each an annual value of more, and three of less, than £500. Valuation (1860) £5664, (1885) £8674, 3s. 1d. Pop. (1801) 1256, (1831) 1439, (1861) 1890, (1871) 2218, (1881) 2582.—*Ord. Sur.*, sh. 97, 1876.

Pitsligo, New, a town and a *quoad sacra* parish in Buchan district, N Aberdeenshire. The town, in the SW of Tyrie parish, stands, 459 feet above sea-level, on the eastern slope of Turlundie Hill (651 feet), 4¼ miles W by N of Strichen station, 4¾ NW of Brucklay station, and 11 SW of Fraserburgh. Founded in 1787 by Sir William Forbes, Bart. of Pitsligo, on the site of the rural hamlet of Caik or Cavoch, it was inhabited about the beginning of the present century almost entirely by illicit distillers, and then presented a mean and most miserable appearance. It has, however, undergone such improvement and renovation, as now to consist almost wholly of substantial and comfortable houses, with neatly kept gardens, and to comprise two parallel streets, nearly a mile in length. Its outskirts and environs are flanked with wood, and of pleasant aspect; and near it are extensive granite quarries. It for some time carried on a considerable linen trade, but the hand manufacture of bobbin-lace is now the staple industry; and it has a post office, with money order, savings' bank, and telegraph departments, a branch of the Union Bank, a National Security Savings' Bank (1841), 9 insurance agencies, 2 hotels, a public library, a horticultural society (1837), gas-works, and fairs on the Wednesday after 26 February, the Wednesday after 25 May, the Thursday after 13 August, and the Wednesday after 5 October. The parish church, standing near the top of the hill, and forming the most conspicuous object in the town, was built in 1798 and renovated in 1853. It has triplet lancet windows, ornate surmounting crosses, a beautiful belfry, and about 1000 sittings. Other places of worship are a plain Free church, a Congregational chapel, and the Episcopal church of St John the Evangelist (1871; 468 sittings), an Early English structure, erected at a cost of £3000. The *quoad sacra* parish, comprising portions of Tyrie, Aberdour, New Deer, and Strichen parishes, measures 6 miles in length and 5 in extreme breadth; was originally constituted for only its Tyrie section by the General Assembly in 1799; and was reconstituted for its present extent, first by the General Assembly in 1835, and next by the Court of Teinds in 1853. It is in the presbytery of Deer and the synod of Aberdeen; the minister's stipend is £120. Glasslaw public, New Pitsligo public, and St John's Episcopalian schools, with respective accommodation for 70, 380, and 316 children, had (1884) an average attendance of 37, 345, and 134, and grants of £42, 7s. 6d., £301, 17s. 6d., and £104, 19s. Pop. of *q. s.* parish (1871) 3090, (1881) 2964, of whom 193 were in Aberdour, 209 in New Deer, 42 in Strichen, and 2520 in Tyrie. Pop. of town (1841) 1262, (1861) 1773, (1871) 2094, (1881) 2056, of whom 1150 were females. Houses (1881) 471 inhabited, 34 vacant, 2 building.—*Ord. Sur.*, sh. 87, 1876.

Pittairthie Castle. See DUNINO.

Pittarrow. See FORDOUN.

Pitteadie Castle. See KINGHORN.

Pittenane. See PETTINAIN.

Pittencrieff, a mansion in Dunfermline parish, Fife, in the south-western vicinity of the town. Built about 1610, and enlarged in 1740, with stones from the Palace ruins, it is the seat of James Hunt, Esq., who owns 945 acres in the shire, valued at £2588 per annum, the Pittencrieff estate having been sold in 1762 for £11,000, in 1787 for £17,600, and lastly in 1800 for £31,500. See DUNFERMLINE.—*Ord. Sur.*, sh. 40, 1867.

Pittendriech, the seat of Sir George Deas, the judge Lord Deas, in the vicinity of Lasswade village, Edinburghshire.

Pittenweem (Celt., ? *Pet-an-weem,* 'the town of the cave'), a small parish containing a town of the same name in the SE of the county of Fife, on the shore of the Firth of Forth. The parish is bounded N by the parish of Anstruther-Wester (landward), E by Anstruther-Wester (burghal), S by the Firth of Forth, W by the parish of St Monans or Abercrombie, and at the NW corner by the parish of Carnbee. The boundary line on the E and W is artificial, but on the N it is formed by the Dreel Burn. The greatest length from E to W is 1¾ mile, the average breadth about ¾ mile, and the area

772·488 acres, including 109·738 foreshore and 2·294 detached. The coast is rocky, and the surface rises steeply from the shore to a height of from 50 to 60 feet, but does not rise much thereafter, the extreme height being 82 feet. The whole surface is cultivated, the soil being mostly a very fertile black loam. The underlying rocks are carboniferous, with limestone and some small seams of coal. The parish is traversed throughout its entire length by the coast road from Elie to Crail, and also by a stretch of the Thornton and Anstruther section of the North British railway system; is in the presbytery of St Andrews and the synod of Fife; and the living is worth £276. It was after the Reformation united with St Monans, Anstruther, and Kilrenny under the charge of one minister; but James Melvil (nephew of the famous Andrew), who succeeded the first minister, Mr William Clark, in 1586, 'finding the four congregationes a burding intolerable and importable, with a guid conscience, . . . sett himself cairfullie for the separating and severall planting of the said congregatiounes, resolving to tak himself to Kilrynnie alean; and delt with Pittenweim, and causit thame prepeare ane auditorie and kirk within thair awin town, in the quhilk he teachit to thame, bathe on the Sabothe and week dayes, nocht intermitting his ordinarie doctrines in the uther kirkis, untill Pittenweim was provydit and plantit with a minister of thair awin, and that without hurt or impearing of the stipend of the kirk of Anstruther Waster;' and the parish became independent about 1588. The churches are noticed in connection with the burgh. The proprietors, inclusive of those in the town, are 2 holding each an annual value of £500 or upwards, 4 holding each between £500 and £100, 7 holding each between £100 and £50, and 45 holding each between £50 and £20. Landward valuation (1856) £647, 11s., (1875) £904, 19s. 8d., (1885) £658, with £150 for the railway. Pop. (1801) 1072, (1831) 1317, (1861) 1710, (1871) 1803, (1881) 2119, of whom 1019 were males and 1100 were females; while 2116 were within the boundaries of the royal burgh.

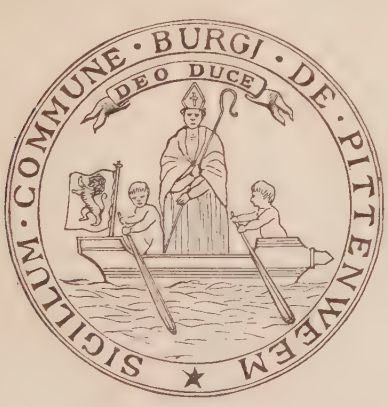
The Town of Pittenweem, near the E end of the parish just described, is a seaport and a royal burgh, and has a station on the Thornton and Anstruther section of the North British railway. By rail it is 9 miles E of Largo, 17½ E of Thornton Junction, and 1¼ mile W of Anstruther. By road it is 5½ miles SE of Crail, and 11 S by W of St Andrews. Like so many of the Fife fishing towns, it is a place of considerable antiquity, and probably dates back to the 13th century. It belonged originally to the priory afterwards mentioned, and was by James III. created a burgh of barony. In 1542 James V. granted a further charter constituting the town a royal burgh, and in 1547 the prior and convent executed two charters granting to the 'provost, bailies, council, community, burgesses, and inhabitants, the burgh as the same was builded or to be builded, and the harbour thereof, and all moors, mosses, and waste ground, common ways, and other commonties, liberties, customs, anchorages, etc., belonging thereto.' In 1593 James VI. farther increased the property of the town by granting to it the 'great house or lodging of the monastery of Pittenweem,' and all these charters were confirmed by Act of Parliament in 1633. Nor were the inhabitants unmindful of their royal benefactor, for when James passed through the burgh on his way to Anstruther House, where he spent a night, he was received by the magistrates, councillors, and minister 'in their best apparel,' and accompanied by a guard of twenty-four of the stoutest men of the place also in their 'best apparel' and armed with partisans; and besides these there were 'other twenty-four with muskets.' Substantial provision was also made for the royal appetite at a table spread at 'Robert Smith's yeet,' where, for the entertainment of the King and his train, there were provided 'sundrie great bunns of fine flour and other wheat bread of the best order, baken with sugar, cannell, and other spices fitting, as also ten gallons of ale, with canary, sack, Rhenish wine, Tent, white and claret wines;' and when his Majesty departed there was a salute of 'thirty-six cannon, all shot at once.' It was at Pittenweem that the customs collector of Fife was, in 1736, robbed by Wilson and Robertson—an incident which, though of little local importance, resulted in the Porteous riots in Edinburgh, and thus aided in the invention of the plot of Scott's *Heart of Midlothian*. The house in which the robbery took place was on the N side of the street to the N of the church. In 1799 the squadron of Paul Jones lay for some time off the harbour, but otherwise the 18th and 19th century history of the place has been of a most uneventful nature.

The town has three main streets with cross intersecting lanes. Of these one follows the line of the coast along the low ground at the harbour; a second, High Street, runs parallel to this on the top of the slope; and a third, still farther N, is along the Elie and Crail road: the second is the principal thoroughfare. Near its E end is the parish church, originally a structure of the first half of the 17th century, but extensively remodelled and altered in 1882. The old tower at the W end still remains with the old clock and bells. It has a balustraded top and a spire, and in the base is a small chamber, with door and grated window looking to the street, which has evidently been used as the tolbooth. Fixed to the W wall of the steeple is the town cross, a simple pillar with the town arms in the middle and the date 1754 on the top. Down the slope to the S is the Cove Wynd, in which the plain town-hall (1821-22) occupies the site of the refectory of the priory. Farther down the lane on the E side is the entrance to the cave or weem from which the name of the town is said to be derived. It is a long cave with two branches, in one of which is a small hollow supplied with good water from crevices in the rock, and both well and cave are associated with the name of St Fillan. From one corner a staircase, now destroyed, has led to the grounds of the priory above, where it is said to have been connected with a secret underground passage. The priory buildings and grounds covered a space of from 2 to 3 acres to the E of Cove Wynd and the church. The northern gateway was removed in 1805 to make room for the Episcopal church. The chief entrance was on the E side, and not far off is the Great House of the priory, and to the S what is termed the Prior's Hall. The priory dates from about 1114, but the buildings that remain are of much later date. One of the later priors was John Rowle, who was a lord of Session in 1544, and accompanied the Regent Moray to France in 1550. In 1583 William Stewart, a captain in the King's guard, descended from Alan Stewart of Darnley, obtained a charter of the priory and lands of Pittenweem, and in 1606 his son, Frederick Stewart, got them erected into a temporal lordship with the title of Baron Pittenweem; but he disponed the superiority to the Earl of Kellie, and dying without issue, the title became extinct. The superiority was afterwards surrendered by the Earl of Kellie to the Crown. The Great House is intimately associated with David Low (1768-1855), the well-known Episcopalian Bishop of Ross and Argyll. Behind the eastern entrance is the 'witch corner,' where the Pittenweem witches were buried. The town seems to have been very much troubled with witches at various times, and the last of them caused a great commotion in 1705, when several poor women were, at the instigation of a hysterical boy, imprisoned and placed at the mercy of a guard of 'drunken fellows, who, by pinching and pricking some of them with pins and elsions, kept them from sleep for several days and nights together.' Under this gentle treatment some of them became 'so wise as acknowledge every question that was ask'd them.' One of them, Janet Corphat, was put in the prison under the steeple—probably the cell that still remains—but escaped by the low window, and got away to Leuchars. Sent back by the minister of that parish, she was set on by a rabble, 'who fell upon the poor creature and beat her unmercifully, tying her so hard with a rope that she was almost strangl'd; they dragg'd her through the streets and alongst the shoar by the heels' till they were disturbed by one of the magistrates. Gathering again, however,

they 'streach'd a rope betwixt a ship and the shoar to a great height, to which they ty'd her fast; after which they swing'd her to and fro from one side to another, in the meantime throwing stones at her from all corners until they were weary. Then they loos'd her, and with a mighty swing threw her upon the hard sands, all about being ready in the meantime to receive her with stones and staves, with which they beat her most cruelly. . . . They laid a heavy door upon her, with which they prest her so sore that she cried out to let her up for *Christ's sake* and she would tell the truth. But when they did let her up, what she said could not satisfy them, and therefore they again laid on her the door, and with a heavy weight of stones on it prest her to death; and to be sure it was so they called a man with a horse and a sledge, and made him drive over her corps backward and forward several times.' These and other particulars of similar brutal behaviour may be read in the pamphlets published at the time in connection with the case, which excited a great deal of attention, and led to legal proceedings against the magistrates, which must have led some of them at least to wish for no more witches in the neighbourhood.

No fewer than thirty breweries are said to have been once in operation about the town, but they have long since vanished, and the present industries are connected with the harbour, which is a creek under Kirkcaldy. Greatly improved in 1855, it has an outer and inner basin, and is safe and commodious, but suffers from its small depth of water. The imports are of the usual description for such a place, and the exports are principally grain and potatoes. A large number of the inhabitants are fishermen, and in 1882 the port, which is for fishery purposes included in the Anstruther district, had 67 first-class fishing boats, 18 second-class boats, and 6 third-class boats; in connection with which 290 resident fishermen and boys found employment. Few of the boats prosecute the fishing from the port itself. Besides the Established church already noticed, there is on the N side of the town a U. P. church erected in 1846, and an Episcopal church erected in 1805-7 on the NE. Two public schools, the East and the South, with respective accommodation for 326 and 219 pupils, had (1884) an average attendance of 229 and 153, and grants of £215, 16s. 11d. and £123, 12s. A distinguished native was John Douglas (1721-1807), Bishop of Salisbury, eminent for his literary abilities as well as for his ecclesiastical position.

A burgh of barony under the priors, and after 1542 a royal burgh, Pittenweem is now, under the General Police and Improvement Act of 1862, governed by a



Seal of Pittenweem.

provost, two bailies, a treasurer, and 8 councillors, and unites with Kilrenny, Crail, Anstruther-Easter, Anstruther-Wester, Cupar, and St Andrews in sending a member to parliament. Parliamentary constituency (1884) 302, municipal constituency 358, including 56 females. The corporation revenue is, on an average, about £700 per annum. There is a post office, with money order, savings' bank, and telegraph departments, branch offices of the Clydesdale and National banks, a National Security Savings' bank, and a gaswork. Valuation (1856) £3890, 9s. 1d., (1885) £6216, 19s. 11d. Pop. (1831) 1309, (1861) 1617, (1871) 1760, (1881) 2116, of whom 1016 were males and 1110 females. The parliamentary burgh, which is slightly smaller than the royal burgh, had at the same time 2090 inhabitants, of whom 1003 were males and 1087 females. In the royal burgh there were 451 houses, and in the parliamentary burgh 443; while 22 were uninhabited, and 1 was being built.—*Ord. Sur.*, sh. 41, 1857.

Pittheavlis, an estate, with a mansion, in East Perth parish, Perthshire, 1 mile SW of the city. It is the property of Lord Elibank, who holds 994 acres in Perthshire, valued at £1871 per annum. See Darnhall.—*Ord. Sur.*, sh. 48, 1868.

Pittodrie, an old mansion in Chapel of Garioch parish, Aberdeenshire, on the north-eastern slope of Bennachie, 1 mile SW of Pitcaple station. Its owner, Hy. Wm. Knight Erskine, Esq. (b. 1858; suc. 1870), holds 3270 acres in the shire, valued at £4250 per annum.—*Ord. Sur.*, sh. 76, 1874.

Pittrichie, a plain commodious mansion of 1819 in Udny parish, Aberdeenshire, 3 miles W by N of Udny station.

Pitullie or **Sandhaven**, a fishing village in Pitsligo parish, N Aberdeenshire, on the Moray Firth, 2¾ miles W by N of Fraserburgh, under which there is a post office of Sandhaven. The harbour, formed in 1840, possesses 46 fishing boats. Pop. (1871) 399, (1881) 585.—*Ord. Sur.*, sh. 97, 1876.

Pladda, an island of Kilmorie parish, Buteshire, in the Firth of Clyde, 5¾ furlongs S of the south-eastern extremity of Arran. Measuring 3½ by 1½ furlongs, it is low and green; and has a lighthouse, erected partly in 1790, partly in 1826, and showing two fixed lights, the one above the other, at elevations of 77 and 130 feet above high-water level, and visible at the distance of 14 and 17 nautical miles. The Sound of Pladda, between the island and Arran, has a chain of rock nearly right across, with depths of from only 2 to 4 feet of water, so that it is unnavigable by any sea-borne vessels.—*Ord. Sur.*, sh. 13, 1870.

Pladda. See Fladda.

Plaidy. See Turriff.

Plean, a village and a *quoad sacra* parish in St Ninians parish, Stirlingshire. The village, lying 3 miles SSE of Bannockburn, has a post office under Stirling, a public school, and an asylum or hospital for 30 old men, founded by Col. Francis Simpson, who died in 1831. Plean House is in the western vicinity of the village. The *quoad sacra* parish, constituted in 1878, is in the presbytery of Stirling and the synod of Perth and Stirling; the living is worth £289. Pop. (1881) of village, 369; of *q. s.* parish, 1037.—*Ord. Sur.*, sh. 39, 1869.

Pleasance, a village in Auchtermuchty parish, Fife, 1¼ mile NNW of the town.

Pleasance, a village near the centre of Dumfriesshire, 8¼ miles NNE of Dumfries.

Plockton, a village in Lochalsh parish, Ross-shire, on the S side of the lower part of Loch Carron, 4 miles W by S of the Strome Ferry terminus of the Dingwall and Skye railway, and 6½ NNW of Balmacara. It ranks as a burgh of regality, engages extensively in fishing, and has a post office, a Government church, a Free church, and a public school. The Government church has the status of a *quoad sacra* parochial church, but has not assigned to it any definite territory. Pop. (1861) 539, (1871) 516, (1881) 440.

Plotcock, a collier village in Hamilton parish, Lanarkshire, 5 miles SSE of the town of Hamilton.

Pluscarden (old forms Ploschardin and Pluscardyn, locally often Pluscarty), a district measuring about 4 miles by 2, and forming the south-western portion of the parish of Elgin. It is a long valley of no great width, with the drainage along the whole length carried

off by the Black Burn, a tributary of the river Lossie. The low ground is from 170 to 200 feet above sea-level, and on the NW side the Eildon or Heldun Hill rises very steeply to a height of 767 feet, and on the SE side the Hill of the Wangie rises with a less rapid slope to a height of 1020 feet. At the extreme SW end the valley is contracted into a narrow glen. There is a post office under Elgin, a Free church, and a public school. Though the glen is pretty in itself, the chief interest lies in the well-preserved ruins of a Cistercian priory on a beautiful haugh near its centre, and 6 miles SW of Elgin. This, one of the three monasteries of the Cistercian Order in Scotland, the others being Beauly and Ardchattan, was founded by Alexander II. in 1230. Before the foundation of the priory there seems to have been an older church on a different site, and the valley was known as the Vale of St Andrew, a name which was retained in the new foundation, the dedication of Pluscarden—or Pluscardine, as the name of the priory is often given—being to the Virgin Mary, John the Baptist, and St Andrew. Although the monks, who were of the Valliscaulian branch of the order, found but few friends after Alexander's death, the community was a very wealthy one, and in Bajimont's Roll in 1274 the monastery is taxed at £533, while Beauly and Ardchattan are entered at £200. Under the protection of the Bishops of Moray, whose authority was fully recognised in 1345, the Cistercians held possession till 1454, when Benedictines were introduced from Urquhart, though there seems to be no truth in the assertion that this was rendered necessary by the corrupt life of the older monks. The last of the Benedictine priors was Alexander Dunbar, who died in 1560; and the first of the lay priors was Lord Alexander Seton —a son of the Lord George who was so faithful a servant to Queen Mary—who in 1577 was succeeded by James Douglas, an illegitimate son of Regent Morton; but on Morton's fall and death in 1581 Seton again resumed possession, parliament expressly declaring 'the pretended gift to James Douglas, son natural to late James Earl of Morton, of nane avail in all times coming.' The monks do not seem to have been disturbed in their possession of the priory itself, and they gradually died out, only one remaining in 1586. In 1595, Seton, then Lord Urquhart, sold Pluscarden to Kenneth Mackenzie of Kintail, from whose descendants it passed in 1649 (probably in connection with the rebellion raised in that year by Thomas Mackenzie of Pluscarden) to Sir George Mackenzie of Tarbat. In 1662 the then Sir George sold the priory and lands to the Earl of Caithness, Major George Beatman and Joan Fraser, his wife; and in 1664 the Earl resigned his share to the other owners, from whom, in 1687, the property was purchased by Brodie of Lethen for his grandson, James Grant of Grant, who, in 1710, sold it to Duff of Dipple, and through him it has descended to the present possessor, the Earl of Fife. A considerable portion of the ruins of the priory still remains, and the grey ivy-clad walls, the soft deep green turf, the old trees that must date from the early times of the monastery, and the heights in the background covered with thriving wood, all combine to form a very pleasant picture. The buildings have been partly in the First and partly in the Second Pointed styles. The church lay to the N, and the nave seems never to have been built. To the S of the south transept was a narrow chapel dedicated to St Mary, and farther S still the chapter-house and calefactory. Over the last three buildings were the dormitories. West of the calefactory was the refectory, to the N of which was the cloister court. To the SSE of these buildings are traces of walls where the prior's house is said to have stood. The precinct is still marked out by the high and massive wall with the principal gateway on the E, and in the N wall are recesses where the fathers had kept their bee-hives. The church has consisted of a choir and two transepts, the latter with aisles on their E sides; at the intersection is a square tower. From the S transept a stone stair leads to the dormitories. In the outside angle, between the choir and the north transept, is what is called the Dunbar Vestry, with a good groined ceiling, on the central boss of which are the Dunbar arms. It was probably erected by the last Benedictine prior. The lintel of the window into the choir is formed by a slab of stone, with a finely incised cross, dating probably from the 13th century. St Mary's aisle, to the S of the south transept, used probably as the sacristry, has a curious portion cut off in one of the corners, with a peculiar slit in the wall near the door. It has possibly been used as a confessional. The chapter-house is square, and has a vaulted roof, with groins passing from the side walls to a central pillar. The walls of the choir, the transepts with their side aisles, the pretty little vestry, St Mary's aisle, the square chapter-house, the calefactory, the dormitories, and the central tower, are still almost entire. On the arch over the entrance from the crossing to the choir, and also on an arch in St Mary's aisle, there are traces of fresco painting. The former is described by Cordiner, in 1788, as having been very perfect in his time. 'There,' he says, 'St John, about to write in an attitude expressive of attention to the objects before him, is seated under a canopy, and, accompanied by his well-known eagle, lifts his eyes to the concave of the arch above, where the glowing colours of that splendid bow which is seen in the cloud in the day of rain attracts our notice.' The sitting figure and the rainbow are still visible, but they are sadly weathered and destroyed. According to the same author, there were still more wonderful frescoes in St Mary's aisle, but no trace of these, except the ornament on the arch mentioned, now remains. The buildings that now exist are of various dates from the middle of the 13th to the middle of the 16th century. The first structure had become ruinous by 1398, but how far this was due to slenderness of proportion, and how far to injury by fire, is uncertain. Both the causes mentioned may indeed have operated, for the first is quite apparent from the numerous alterations made for the purpose of giving additional strength —*e.g.*, windows lessened in size, archways partly built up, etc.—and the walls in many places show traces of fire. Probably to injury from the latter cause may be ascribed the curious casing of later masonry by which the pillars supporting the central tower have been strengthened. The calefactory has a vaulted roof supported by two pillars, and is now used as a church for the district, a purpose for which it was fitted up in 1821 by the then Earl of Fife.* At the same time the dormitories were re-roofed, and that part of the building is now used as a ball-room for the district! The church was at first a chapel of ease under Elgin, but at the Disruption, the minister and most of the people joining the Free Church, the Earl of Fife made over the use of the room to the majority. The pulpit is the one procured in 1680 for Old St Giles' Church in Elgin, and sold to the Earl of Fife's factor for £5 when that church was pulled down in 1826 [see Elgin]. It has a rim for the baptismal font, and a stand for an hour-glass, both made of characteristic twisted iron work. The old monastery grounds are now used as nursery grounds for young trees to be used in plantations on the Fife estates in the neighbourhood; but a number of old trees, dating from monastic times, still remain, particularly a fine pear tree which yields large crops of excellent fruit. The *Book of Pluscarden* is an early history of Scotland based on Bower, and supposed to have been written in the priory, about 1461, by a monk named Maurice Buchanan. It was published in the *Historians of Scotland* series in 1877. See also the works referred to under Elgin; E. Chisholm Batten's *Charters of the Priory of Beauly* (Grampian Club, Lond. 1877); and S. R. Macphail's *History of the Religious House of Pluscardyn*, (Edinb. 1881).

Polkemmet, a two-story Scottish Baronial mansion in Whitburn parish, Linlithgowshire, 1½ mile W of Whitburn town. A large addition was made in 1822; but

* This occupation was at first intended to be only temporary till the choir should be fitted up for use in public worship, but various delays and changes led to things being left as they were.

the older part is known to be of earlier date than 1620, when the estate was sold by the Shaws to the Baillies. Its present proprietor, Sir William Baillie, second Bart. since 1823 (b. 1816 ; suc. 1854), was Protectionist M.P. for the county 1845-47, and holds in it 4320 acres, valued at £6382 per annum.—*Ord. Sur.*, sh. 31, 1867. See John Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Polla. See DURNESS.

Pollewe. See POOLEWE.

Pollok Castle, a mansion in Mearns parish, Renfrewshire, 2½ miles SE of Barrhead. Crowning a rising ground, among fine old trees, and commanding an extensive view, it was a château-like four-storied edifice, erected in the latter half of the 17th century, and twice enlarged, on the last occasion in 1856 ; but on the night of 31 July 1882 it was wholly destroyed by fire, the damage being estimated at £30,000. Its owner, Sir Hew Crawfurd-Pollok, ninth Bart. since 1638 (b. 1843 ; suc. 1867), represents the ancient families of Pollok of Pollok and Crawfurd of KILBIRNIE and Jordanhill, both dating from the 12th century, his great grandmother, Robina Pollok, having married Sir Hew Crawfurd of Jordanhill soon after the middle of last century. He holds 2855 acres in the shire, valued at £3399 per annum.—*Ord. Sur.*, sh. 22, 1865.

Pollok House, a mansion in Eastwood parish, Renfrewshire, near the right bank of the White Cart, 1½ mile WNW of Pollokshaws. Erected in 1747-52, it is a plain quadrangular four-storied building, with beautiful grounds, and on 15 Aug. 1859 was honoured by a visit from the Prince of Wales. Pollok formed part of the broad estates that were granted by David I. to Walter the High Steward about the year 1124. The superiority was acquired by Rolland de Mearns, and afterwards by the Maxwells of CAERLAVEROCK ; and about 1270 the lower division of Pollok, commonly called Nether Pollok, was given by Sir Aymer Maxwell of Maxwell, Caerlaverock, and Mearns, to his younger son, Sir John Maxwell, the first of the Maxwells of Pollok. Among his descendants, who by marriage were allied to royalty, were the brave young Sir John, who earned his spurs well at Otterburn (1388) ; Sir John, who fell at the Battle of Dryfe Sands (1593) ; Sir George, for bewitching whom, in 1677, five persons were strangled and burnt ; Sir John, created a baronet in 1682 ; and Sir John, the eighth Bart. (1791-1865), at whose death the estate and the baronetcy devolved on his nephew, William Stirling, Esq. of Keir. From him, the late Sir William Stirling-Maxwell, the estate of Pollok passed in 1878 to his younger son, Archibald (b. 1867).—*Ord. Sur.*, sh. 30, 1866. See EASTWOOD, KEIR, CROOKSTON, DARNLEY, HAGGS CASTLE ; Dr Wm. Fraser's *Memoirs of the Maxwells of Keir* (2 vols., Edinb., 1865) ; and his *Cartulary of Pollok-Maxwell* (Edinb. 1875).

Pollokshaws, a town and a *quoad sacra* parish in the civil parish of Eastwood, Renfrewshire. The town, popularly known as the Shaws, is on the White Cart, where it is joined by Auldhouse Burn, and has a station on the Glasgow, Barrhead, and Kilmarnock railway, 3 miles SSW of Glasgow. With a pleasant situation in the midst of an undulating and fertile tract of country, it is a seat of manufacturing industry. A printfield, one of the earliest in Scotland, was established in 1742, and bleaching and handloom weaving, which were introduced soon after, were long extensively carried on. A tannery for the manufacture of chamois leather, which was begun in 1782, and was the earliest in Scotland, did not prosper. A cotton mill, erected about the end of last century, was the first in Scotland lighted with gas. Calico printing, which was long carried on, having declined, turkey-red dyeing took its place, and was vigorously carried on till 1837, when it was given up, and since then the staple industries have been cotton-spinning, power-loom weaving, bleachfields, print-works, paper-mills, and iron-foundries. The bridge over the Cart dates from 1654, but it has since been widened and repaired. The town-house, with its spire, and the trades' hall, do not call for particular notice. The *quoad sacra* parish church, originally Auldfield chapel of ease, in King Street, was built in 1840. Eastwood parish church, on the SW, built in 1862-63 at a cost of £3500, is a good Early English structure with 1050 sittings, nave and transepts, and a tower and spire 130 feet high at the W end. It superseded an older church of 1781, and was reopened in March 1877, after improvements, including a three-light stained window, new choir seats, etc. There are also two Free churches in King Street and Rosendale Road, a U.P. church, an Original Secession church, and the Roman Catholic church of St Mary Immaculate (1865 ; 800 sittings ; redecorated 1884), but none of them call for particular notice. Four schools—the Academy, public, infant, and Roman Catholic—with respective accommodation for 700, 471, 150, and 327 pupils, had (1884) an average attendance of 352, 362, 123, and 269, and grants of £355, 19s., £299, 3s., £87, 8s., and £233, 17s. 6d. The town was erected into a burgh of barony by Crown charter in 1814, the council consisting of a provost, a bailie, and six councillors, being elected by all inhabitants paying £4 of rent and upwards ; but the municipal government is now carried on by the commissioners appointed under the General Police and Improvement Act. Water is supplied from the Glasgow waterworks ; and gas is provided from works carried on by a joint-stock company. There is a post office, with money order, savings' bank, and telegraph departments, under Glasgow, branch offices of the Clydesdale and Commercial Banks, agencies of 8 insurance companies, a public library, established in 1844, an abstainers' hall, a young men's literary and mutual improvement association, a trades' friendly society, a district Sabbath School Union, a tract society, a destitute sick society, and some other institutions. A sheriff small debt court is held on the second Friday of every month, and a justice of peace court on the first Tuesday of every month. Pop. of town (1831) 4627, (1861) 7648, (1871) 8921, (1881) 9363, of whom 5056 were females, and 6402 were in Pollokshaws *quoad sacra* parish. Houses (1881) 2058 inhabited, 170 vacant, 9 building.—*Ord. Sur.*, sh. 30, 1866.

Pollokshields. See GOVAN.

Polmaily House, a mansion in Urquhart parish, Inverness-shire, near the left bank of the Enrick, 2 miles W by N of Drumnadrochit.

Polmaise Castle, a mansion in St Ninians parish, Stirlingshire, near the right bank of the meandering Forth, 3 miles ESE of Stirling. About 1568, William Murray of Touchadam married a daughter and co-heiress of James Cuninghame of Polmaise ; and their descendant, Lieut.-Col. John Murray (b. 1831 ; suc. 1862), holds 6813 acres in the shire, valued at £9894 per annum.—*Ord. Sur.*, sh. 39, 1869.

Polmont (Gael. *poll-monaidh*, 'pool of the hill'), a village and a parish of E Stirlingshire. The village stands ¾ mile NNE of Polmont Junction on the North British railway, this being 4⅝ miles W by N of Linlithgow, 22¼ W by N of Edinburgh, 3 E by S of Falkirk, and 25 ENE of Glasgow. It has a post office, with money order, savings' bank, and telegraph departments. Pop. (1861) 429, (1871) 455, (1881) 519.

The parish, containing also a small portion of GRANGEMOUTH, and the villages of Craigs, Redding, East Shieldhill, and Wallacestone, was disjoined from Falkirk in 1724. It is bounded NE by the Firth of Forth and Borrowstounness in Linlithgowshire, SE by Muiravonside, and SW and NW by Falkirk. Its utmost length, from NE to SW, is 6¼ miles ; its breadth varies between 2½ furlongs and 3¼ miles ; and its area is 7289½ acres, of which 1697¾ are foreshore and 79⅓ water. The Firth of Forth, which washes the parish for a distance of 2 miles, from the mouth of the Carron to that of the Avon, is fringed at low water by an expanse of foreshore, 7 furlongs to 2 miles broad. The AVON winds 5½ miles west-north-westward and north-eastward along all the Linlithgowshire border ; GRANGE or Westquarter Burn flows 3¼ miles north-north-westward, mainly along the Falkirk boundary, to the mouth of the

Carron; and the UNION CANAL traverses the parish for 2⅞ miles, from E to W, immediately S of the railway. The coast is low and flat; a broad tract inward thence is carse land, rising only 14 feet above sea-level, protected on the coast side by a strong embankment, and all too valuable to bear anything but grain; a tract southward thence, forming the middle district, has an undulating surface, and rises to altitudes of 253 and 263 feet; and the south-western extremity is partly undulating, partly moorish, and rises gradually to an eventual altitude of 552 feet. Much of the landscape is embellished and beautiful; and many standpoints command extensive and brilliant views. The rocks belong chiefly to the Carboniferous formation, and include valuable strata of sandstone, coal, and ironstone, all of which have been largely worked. Excellent clay, too, abounds, and is used in two tile and brick works. Mineral springs, strongly impregnated with iron, are in several places. The soil of the carse lands is deep fine clay, quite free from stones, but abounding in marine shells; that of the other districts is partly clayey, partly mossy, but chiefly gravelly or sandy. About 120 acres are under wood; 650 are pastoral or waste; and all the rest of the land is in tillage. The principal mansions are Westquarter, Polmont Park, Polmont House, Polmont Bank, Parkhill, Clarkston, and Millfield; and the chief antiquity is part of the line of ANTONINUS' WALL, now destitute of every vestige of masonry or mound. The Duke of Hamilton takes from this parish the title of Baron Polmont (cre. 1643). Eight proprietors hold each an annual value of £500 and upwards, 17 of between £100 and £500. Giving off a portion to Grangemouth *quoad sacra* parish, Polmont is in the presbytery of Linlithgow and the synod of Lothian and Tweeddale; the living is worth £427. The old kirk, built in 1731, stands, an ivy-clad ruin, in the midst of the churchyard, its interior planted with roses, yews, and rhododendrons. The new parish church is a handsome Gothic edifice of 1844, and was adorned in 1876 with two stained memorial windows. Robert Henry, D.D. (1718-90), the historian of England, is buried in the churchyard. There is also a Free church at Polmont village. Six schools, with total accommodation for 861 children, had (1884) an average attendance of 666, and grants amounting to £552, 11s. Valuation (1860) £14,501, (1884) £27,781, 11s. 6d. Pop. (1801) 2197, (1831) 3210, (1861) 4111, (1871) 3910, (1881) 3955, of whom 3861 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 31, 1867.

Polmood Burn. See TWEEDSMUIR.

Polnoon Castle, an ancient castle in Eaglesham parish, Renfrewshire, near a head-stream of White Cart Water, 5 miles S by E of Busby. It was built with the ransom of Harry Hotspur, whom Sir John Montgomerie had taken prisoner at Otterburn (1388); and it long was a chief seat of the EGLINTON family; but it is now represented by only a few smooth mounds of rubbish.—*Ord. Sur.*, sh. 22, 1865.

Poltalloch, the ancient seat of the Malcolm family, in Kilmartin parish, Argyllshire, on the eastern shore of Loch Craignish, 10 miles NNW of Lochgilphead. Its present proprietor, John Malcolm, Esq. (b. 1805; suc. 1857), holds 82,579 acres in the shire, valued at £18,200 per annum.

Poltanton Burn. See LESWALT.

Polton, a group of places in Lasswade parish, Edinburghshire, adjacent to the North Esk river, and within 1½ mile SSW of Lasswade village. It contains the terminus of the Eskbank, Lasswade, and Polton line, 10¾ miles by rail SSE of Edinburgh; the papermills of Messrs Annandale & Son; Polton Colliery; Polton House (Rt. Dundas, Esq. of Arniston), etc.—*Ord. Sur.*, sh. 32, 1857.

Poltonhall, a village in Cockpen parish, Edinburghshire, ¾ mile SSW of Bonnyrigg, and 1½ mile S by W of Lasswade. Pop. with Dalhousie Colliery (1871) 312, (1881) 595.

Polwarth, a village and a parish of central Berwickshire. The village, an ancient place, stands near the northern border of the parish, on ground originally swampy, but now drained, 3 miles NNE of Greenlaw, and 4 SW of the post-town Duns. Two old thorn trees formerly stood in the centre of the village green; and a custom prevailed for upwards of 300 years down to the commencement of the present century, of dancing at every marriage round these trees—a custom celebrated in several songs, particularly one by Allan Ramsay, set to the tune of 'Polwarth on the Green.'

The parish, containing also MARCHMONT station at the south-eastern border, is bounded NW by Longformacus, N by Langton, SE by Fogo, and SW and W by Greenlaw. Its utmost length, from E by N to W by S, is 4¼ miles; its utmost breadth is 2¼ miles; and its area is 3013 acres, of which 13¼ are water. A small lake (1¼ × 1 furl.) lies near the western border; and the drainage is carried eastward towards Blackadder Water by the Kirk Burn and other rivulets. The surface, on the mutual border of the Merse and the Lammermuir district, declines in the extreme E to 370 feet above sea-level, and rises westward till it attains a maximum altitude of 933 feet at Kyles Hill. The predominant rocks are various kinds of sandstone; but Kyles Hill consists of a hard reddish porphyry. The soil of the uplands is moorish, and elsewhere is mainly argillaceous, but here and there is sand or gravel. Nearly 400 acres are under wood; rather less than half of the entire area is in tillage; and nearly all the remainder is pasture, moor, or moss. MARCHMONT HOUSE, noticed separately, is the only mansion; and Sir Hugh Hume-Campbell, Bart., is sole proprietor. Polwarth is in the presbytery of Duns and the synod of Merse and Teviotdale; the living is worth £332. The parish church, ⅝ mile SSE of the village, crowns the edge of a beautiful glade in the grounds of Marchmont, and was rebuilt by Patrick Home, first Earl of Marchmont, in 1703. According to a Latin inscription of that date, its predecessor was consecrated prior to 900, and restored in 1378. In 1684 the patriot, Patrick Home, concealed himself in the family burial vault beneath the church, where he remained for several weeks, supplied every night with food by his celebrated daughter Grizel, afterwards Lady Grizel Baillie, then only twelve years of age. The public school, with accommodation for 55 children, had (1884) an average attendance of 35, and a grant of £34, 2s. 6d. Valuation (1865) £2624, 2s., (1884) £2563, 3s., *plus* £1212 for 2¼ miles of railway. Pop. (1801) 291, (1831) 288, (1861) 251, (1871) 249, (1881) 227.—*Ord. Sur.*, shs. 25, 26, 1865-64.

Pomathorn, a station in the S of Lasswade parish, Edinburghshire, on the Peebles railway, near Howgate village, 2½ miles NE of Leadburn, and 15 S of Edinburgh.

Pomona or **Mainland,** the chief and much the largest of the Orkney islands. It lies southward of the centre of the Orkney archipelago; is washed, on the W and the N, by the Atlantic Ocean; is separated, on the NE, by narrow sounds from Rousay, Gairsay, Shapinshay, and some smaller adjacent islands, and by Westray Firth and Stronsay Firth from the entire group of the North Isles; is washed, on the E, with exception of two or three intervening islets, by the German Ocean; and is separated, on the S, by Holm Sound, Scapa Flow, and Hoy Sound from Burray, South Ronaldshay, Flotta, Hoy, and some smaller islands. Its utmost length, from E to W, is 24¼ miles; its utmost breadth, from N to S, is 16½ miles; and its area, in consequence of great and numerous indentations on its outline, is probably not more than 150 square miles. Its western district, to the extent of about 16 miles by 11, is fairly compact, and has a somewhat ellipsoidal outline; but its eastern district is mostly cut by intersections of the sea into a series of peninsulas and isthmuses, and ranges in breadth from a maximum of 8½ miles to a minimum of 2 or 3 furlongs. Safe harbourage and places of anchorage occur at brief intervals on all the north-eastern, the eastern, and the southern coasts; and are particularly good at Kirkwall Bay, Deer Sound, Holm Sound, and Stromness.

Several fresh-water lakes—Stenness, Kirbister, Skaill, Boardhouse, Hundland, Swannay, and others—lie in the interior; abound in various kinds of trout; and emit considerable water power; but there are no streams larger or longer than mere burns; and salmon waters of any kind are entirely wanting. No spot is further than 4½ miles from the sea; and by far the larger part of the area is not more than 2 miles. The western coasts, in general, are bold and precipitous, and often rise in mural cliffs, pierced with caves and natural arches, or torn and shattered into detached masses and isolated pinnacles; the western district, though nowhere mountainous or wildly upland, comprises a considerable extent of hill and moor; and the other districts, though all comparatively low, likewise include many breadths and patches of moorish land; but some large fertile valleys, possessing the double advantage of a sheltered position and a loamy soil, lie among the hills; and an extensive aggregate of good arable land lies round the moors or along the shores. The parishes into which Pomona is divided are Birsay, Sandwick, Stromness, Evie, Rendall, Harray, Firth, Stenness, Orphir, Kirkwall, St Andrews, Deerness, and Holm; but Birsay and Harray, Evie and Rendall, Firth and Stenness, and St Andrews and Deerness, are each pair mutually united. Pop. (1801) 13,929, (1831) 15,787, (1861) 17,240, (1871) 16,541, (1881) 17,165. See ORKNEY.

Ponfeigh, a collier village in Carmichael parish, Lanarkshire, with a station on the Lanark and Douglas branch of the Caledonian railway, near the right bank of Douglas Water, 4½ miles S of Lanark.

Poniel Water. See DOUGLAS.

Pool. See MUCKHART.

Poolewe, a village and a *quoad sacra* parish in Gairloch parish, Ross-shire. The village stands at the head of Loch Ewe, and at one of the western terminations of the military road from Dingwall through the centre of Ross-shire, 2 miles NNW of the foot of Loch Maree, 6 NNW of Gairloch village, 7 S by W of Aultbea, 27½ WNW of Auchnasheen station, and 55¼ W by N of Dingwall. A chief point of communication across the Minch with the Outer Hebrides, it serves as a conjoint centre with Gairloch village and Kinlochewe for visiting the superb scenery of Loch Maree; and has a post office, with money order, savings' bank, and telegraph departments, an inn, an Established church, a Free church, and a public school. The Established church was built in 1828, and contains 350 sittings. The *quoad sacra* parish, constituted by ecclesiastical authority in 1838, and reconstituted by civil authority in 1851, is in the presbytery of Lochcarron and synod of Glenelg. The minister's stipend is £138. Pop. of *q. s.* parish (1871) 2623, (1881) 2317, of whom 2198 were Gaelic-speaking.—*Ord. Sur.*, sh. 91, 1882.

Port. See MONTEITH, PORT OF.

Port-Appin, a village in Lismore and Appin parish, Argyllshire, on the E shore of Loch Linnhe, opposite the NE end of Lismore island, and 3½ miles SSW of Appin village. It has a temperance hotel, and is a ferry station.

Port-Askaig. See ASKAIG, PORT.

Port-Bannatyne. See KAMESBURGH.

Portcarren, a village on the SE shore of Lismore island, Argyllshire, 5¼ miles NNW of Oban.

Port-Charlotte, a village in Kilchoman parish, Islay island, Argyllshire, on the W coast of Loch Indal, opposite Laggan Point, 7½ miles SW of Bridgend, and 16 SW of Port-Askaig. It has a post office under Greenock, an inn, a distillery, and a public school. Pop. (1861) 562, (1871) 484, (1881) 502.

Port-Crinan. See CRINAN.

Porteasie. See PORTESSIE.

Port-Edgar. See QUEENSFERRY.

Port-Ellen, a seaport village in Kildalton parish, Islay island, Argyllshire, at the head of a small bay, 6 miles NNE of the Mull of Oa, 11¾ SSE of Bowmore, and 17 W by S of Gigha. Founded in 1824, and named in compliment to Lady Ellinor Campbell of Islay, it rose rapidly into importance as a place of local commerce; and on a rocky promontory near the middle of its bay is a commodious quay, constructed in 1826 and improved in 1832. It has also safe anchorage ground, and a lighthouse; is visited by the steamers which ply between Islay and Glasgow; carries on a considerable amount of fishing; and has a post office under Greenock, with money order, savings' bank, and telegraph departments, a branch of the Royal Bank, two inns, and a public school. Pop. (1841) 904, (1861) 1007, (1871) 979, (1881) 989.

Port-Elphinstone, a southern suburb of INVERURIE, in Kintore parish, Aberdeenshire, on the right bank of the river Don. It took its name, and during 1807-54 derived its importance, from being situated at the NW end of the quondam Aberdeen Canal; it now contains an extensive goods station of the Great North of Scotland railway, and is still a convenient centre of trade; and it has a post office under Inverurie, extensive grain mills, paper-mills, two saw-mills, a brewery, a nursery, a public school, and a public library. Pop. (1861) 421, (1871) 435, (1881) 473, of whom 356 were within Inverurie burgh.—*Ord. Sur.*, sh. 76, 1874.

Port-Errol or **Ward-of-Cruden,** a coast village in Cruden parish, Aberdeenshire, at the mouth of the Water of Cruden, 11½ miles NE of Ellon, under which it has a post and telegraph office. A promising station of the herring fishing, it has a lifeboat and rocket apparatus, an hotel, 68 boats, and a recent harbour, whose inner basin is 300 feet long and 150 to 175 feet wide. The Aberdeen Lime Co. here ships corn, and imports coal, manures, etc., doing a large business. Pop. (1881) 493.—*Ord. Sur.*, sh. 87, 1876.

Portessie, a fishing village in Rathven parish, Banffshire, 1¼ mile ENE of Buckie. In 1727 it consisted of only five houses, but it has made such progress as now to possess 145 fishing boats, employing 290 men and boys; and it has a Wesleyan Methodist chapel. Pop. (1793) 178, (1841) 411, (1861) 575, (1871) 877, (1881) 1061.—*Ord. Sur.*, shs. 95, 96, 1876.

Port-Float. See FLOAT BAY.

Port-Gill. See GILL.

Port-Glasgow, a parish, with a parliamentary burgh of the same name, on the N coast of the Lower Ward of Renfrewshire. It is bounded N by the Clyde, E and S by Kilmalcolm, and W by Greenock. The boundary on the E and S is artificial, but on the N it is formed by the Clyde, and on the W by Devol Burn to a point about ⅛ mile above Wallace's Loup. The greatest length of the parish, from the corner of the West Harbour on the N to the extreme southern point, is fully 1½ mile; the greatest width, from Laigh Auchinleck on the E to Wallace's Loup on the W, is barely 1½ mile; and the area is 1031·772 acres, of which 39·381 are foreshore and 48·524 water. There is a flat strip along the Clyde on the N side from 13 to 20 feet above sea-level, and from this the ground slopes rapidly up to the 200-feet line which lies immediately to the S of the burgh, and still more rapidly to the 500-feet line farther to the S. From this the rise to 600 feet is more gradual, and the highest points are 700 feet on the SW and 656 near the extreme S. The soil of the flat tract along the Clyde is a very fertile loam, but that along the higher ground is cold and poor. The underlying rocks are mostly volcanic. The drainage of the parish is effected by Devol Burn on the W—along the course of which there are several small waterfalls—and some smaller burns all flowing to the Clyde. In the SW is Douglehill Dam or Reservoir (2×1 furl.). The only object of interest beyond the town is Newark Castle in the NE, which is separately noticed. A line across the Clyde from Newark Castle to Cardross is the lower limit of the jurisdiction of the Clyde Trustees; while below this the care of the channel and estuary is under the Clyde Lighthouse Trust. The parish is traversed from E to W by the main line of road from Glasgow along the edge of the river and Firth, and by the Glasgow, Paisley, and Greenock branches of both the Caledonian and Glasgow and South-Western railways. From the

former the Wemyss Bay branch strikes off close to the western boundary of the parish.

Civilly, the parish was, prior to 1695, in the parish of Kilmalcolm, and ecclesiastically, it is divided into the parishes of Port-Glasgow and Newark, the latter originally established in 1774 as a chapel of ease, but constituted as a *quoad sacra* charge in 1855. Both are in the presbytery of Greenock in the synod of Glasgow and Ayr, and the living of Port-Glasgow is worth £250. The churches are noticed in the following article, and the landward school board is united with that of East Greenock. The industries are noticed under the town. The principal landowner is Sir Michael Shaw-Stewart, Bart. of Greenock and Blackhall, and 12 others hold each an annual value of £500 or upwards, 54 hold each between £500 and £100, 45 hold each between £100 and £50, and there are a number of smaller amount. Valuation, exclusive of burgh, (1884) £771, 13s. Pop. of entire parish (1801) 3865, (1831) 5192, (1861) 7204, (1871) 9912, (1881) 10,913, of whom 5568 were males and 5345 females. Of the whole population 10,802 were at that time within the parliamentary boundary, and 7626 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 30, 1866.

Port-Glasgow, a seaport and parliamentary burgh on the Firth of Clyde, occupying the whole of the northern portion of the parish just described. It has a station on the Glasgow, Greenock, and Wemyss Bay section of the Caledonian railway, 19¾ miles WNW of Glasgow. The site is a belt of flat alluvial ground 13 to 20 feet above sea-level, lying along the shore of the Clyde, and as the ground to the S rises by two successive stretches of hill rising to over 500 feet, the appearance from the river is picturesque. The town itself is well built; the principal streets following the line of the bay occupied by the docks, and the minor ones running parallel to these or striking off at right angles. The districts to the W and S are occupied by villas. Founded in the middle of the 17th century, it has none of the ancient historical associations belonging to many of the other burghs along the Clyde. The earlier seaports connected with the trade of Glasgow were situated on the Ayrshire coast, but between 1650 and 1660 the commerce of the great city of the west had so much increased that the distant harbours were found expensive and inconvenient, and the community resolved to have a harbour of their own. The deepening of the bed of the Clyde was as yet unthought of, and after unsuccessful efforts to acquire ground at Troon and at Dumbarton, a deputation of the council reported on 4 Jan. 1668 that they had had 'ane meiting yeasternight with the lairds, elder and younger, of Newark, and that they had spoke with them anent the taking of ane piece of land of theirs in feu, for loadning and livering of their ships there, anchoring and building ane harbor there, and that the said lairds had subscryvit a contract of feu this morning: quhilt was all allowed and approvine be said magestratis and counsell, and efter this the twa feu contracts made between the saidis lairdis of Newark, elder and yor., and the towne were red and subscryvit, being that the saids Newark, elder and yor., had set ane merk land, as a pairt of their lands of Newark to the towne, in feu for payment yeirlie of four merks feu dewtie, and relieving them of the king's taxatioune effeirand to a merk land.' On the 13 acres thus acquired the town soon began to grow, as the erection of a pier and docks was set about at once, and the place under the name of Newport Glasgow was by Crown charter constituted a free port and a burgh of barony. From this time until its trade received a very severe check from the deepening of the Clyde and the consequent transference of the greater portion of the commerce to Glasgow, the port prospered steadily. In 1710 it was constituted the principal custom-house port of the Clyde, and soon afterwards the town extended its original limits so greatly that it came in contact with, and practically absorbed the village of Newark—a burgh of barony belonging to Hamilton of Wishaw. Port-Glasgow thus became two burghs of barony subject to two different

superiors, a state of matters that was found so inconvenient that an act of parliament was obtained in 1775 erecting them into a separate municipality under councillors called trustees. Besides other provisions, power was given to bring in water; to pave, clean, and watch the streets; to erect public markets; and to repair the quays. Harbour matters have all along been diligently attended to, and the original graving dock, built in 1762, and subsequently improved at great expense, was the first graving dock in Scotland. It was in 1873-74 superseded by a new one of improved construction. The length of its floor is 310 feet, the width at the entrance 45 feet, the depth of water on the cill at low water is 6 feet, at high water of neap tides 14 feet, and at high water of spring tides 16 feet. The original harbour occupied the position now covered by the West and East Harbours, the wet dock to the E, which is capable of floating very large vessels, having been formed, in 1834 and subsequent years, in a bay called Newark Bay. It covers an area of 12 acres, and cost about £40,000. Farther E still are ponds and enclosures for the storage of timber. All the basins are well sheltered, easy of access, and lie in a convenient position with regard to the fairway of the Clyde, which is at this point somewhat narrowed by shoals, but is clearly and carefully marked out by buoys and beacons. Harbour affairs are managed by a body of trustees, comprising the provost, magistrates, and town councillors of the place, the lord provost and senior bailie of Glasgow, and four members elected by the shipowners and ratepayers. Port-Glasgow is an independent port, having jurisdiction on the S side of the Clyde from the Greenock whale-fishery buildings eastward to Blantyre near Bishopton House, and on the N side of the Clyde from the point of Ardmore eastward to the W end of Dumbuck Hill. It includes the navigation of the Leven to Dumbarton. The number of vessels registered in the port with their tonnage has been, at various dates, as follows:—

Year.	No. of Vessels.	Tonnage.
1818	133	19,133
1843	74	12,952
1845-49	..	12,860
1854	67	8,464
1868	39	9,671
1875	35	15,133
1884	34	11,321

The great falling off owing to almost the whole of the coasting trade being removed to Glasgow, in consequence of the deepening of the Clyde, and the subsequent improvement due to the natural growth of the port itself, is clearly shown. In 1868, 29 ships, with a tonnage of 8851 tons, were sailing vessels, while 10 with 820 tons were steamers. In 1884, 18 ships of 8570 tons were sailing vessels, while 16 with 2751 tons were steamers. The following table shows the tonnage of vessels that entered and cleared from and to foreign and colonial ports and coastwise, with cargoes and ballast, at various dates:—

	Entered.			Cleared.		
Year.	British.	Foreign.	Total.	British.	Foreign.	Total.
1804	..	..	25,948	..	..	32,339
1817	..	..	28,043	..	..	32,778
1853	..	..	44,281	..	..	33,384
1860	..	..	29,169	..	..	19,745
1874	51,344	4429	56,773	62,980	9614	72,594
1883	..	..	..	..	..	..

The amount of customs in 1864 was £106,925; 1871, £18,330; 1873, £8008; 1874, £1183; 1883, not given. Part of the enormous falling off is due to the reduction in the duties on sugar. The principal trade is with British North America, and the next with the West Indies, these two branches of commerce employing about

three-quarters of the tonnage entering the port. Trade is also carried on with the United States, the Mediterranean, and the East Indies. The North American import trade is chiefly in timber. The principal exports are iron, steel, soft goods, machinery, and coal, the last to the extent of about 20,000 tons annually.

The industries connected with the town are shipbuilding, saw mills, iron and brass foundries, sail-cloth factories, and establishments for the manufacture of sails, blocks, and rivets.

Public Buildings, Municipality, etc.—The railway line runs nearly parallel to the shore through the middle of the town, and the station is near the centre. The principal streets are Fore Street, fronting the East and West Harbours; Bay Street, fronting the Wet Dock; and King Street and Princes Street parallel to Fore Street. The townhouse is a good Doric building, with tetrastyle portico, erected in 1815 at a cost of £12,000, and containing council chambers, town offices, court house, and police station. The clock-spire is 150 feet high. The Public Hall, in Princes Street, was erected in 1873. The parish church, erected in 1823 at a cost of £3000, is a plain quadrangular building with 1200 sittings. Newark church, to the SW, is a plain building of 1774, with 1500 sittings. The first Free church dates from the Disruption, and contains 950 sittings; the second, formerly a church connected with the Reformed Presbyterians, has 300 sittings; and the third, erected in the west end, was opened in 1876, and contains 500 sittings. The two U.P. churches call for no particular notice. St Mary's Episcopal church, at the E end of the town, was built in 1856-57, by Miss Stewart, at a cost of £4000, and endowed by her with a fund of £10,000. It contains 340 sittings. St John's Roman Catholic church, with 600 sittings, was erected in 1854, and superseded a previous building. The following are the schools, with their accommodation, average attendance, and grants in 1883-84:—Academy Place (337, 234, £180, 7s.), Bouverie Terrace (176, 185, £99, 18s. 8d.), Chapelton (450, 293, £258, 2s.), King Street (217, 230, £127, 7s.), Princes Street (" , 12, £4, 6s.), Beaton's Free (181, 153, £113, 6s.), Episcopal (106, 97, £82, 2s. 6d.), and Roman Catholic (378, 403, £277, 5s.).

As has been already noticed, the burgh acquired municipal government in 1775, and the powers of the then corporation were enlarged by a subsequent act in 1803, when provision was made for the erection of a new court house, a jail, and other public buildings. It was constituted a parliamentary burgh in 1832, and by the burgh reform act of 1833 the number of the councillors was reduced from 13 to 9. Since that time, part of the general police act has been adopted, and there are now a provost, 3 bailies, and 5 councillors. The corporation revenue, in 1833, was £1889; in 1865, £4150; in 1883, inclusive of gas-work, £13,999. The police force consists of 9 men (1 to every 1473 of the population), and the yearly pay of the superintendent is £143. The town has a head post office, with money order, savings' bank, insurance, and telegraph departments; branch offices of the Bank of Scotland, Clydesdale, Royal, and Union Banks; agencies of 31 insurance companies; and several good hotels. There is a Liberal newspaper, *The Port-Glasgow Observer* (1875), published every Saturday. Among the miscellaneous institutions may be noticed a Volunteer Drill Hall, an Oddfellows Hall, a Public Library and Reading Room, and the usual benevolent societies. There is a weekly market on Friday, and a three days' fair on the Monday, Tuesday, and Wednesday before the first Thursday of July. There is a burgh court every Thursday; ordinary justice of peace courts are held on alternate Mondays; and justice of peace small debt courts on the first Monday of every month.

Seal of Port-Glasgow.

Port-Glasgow unites with Dumbarton, Renfrew, Rutherglen, and KILMARNOCK in sending a member to serve in parliament. Parliamentary constituency (1885) 1387; municipal 1847. Valuation (1876) £36,983, (1885) £54,040. Pop. (1841) 6938, (1861) 7214, (1871) 9851, (1881) 10,802, of whom 5482 were males and 5320 females. Houses (1881) 2166 inhabited, 188 uninhabited, and 1 building. The population of the police burgh, of which the boundary extends farther W and includes part of the parish of Easter Greenock, was, in 1881, 13,224.

Port-Gordon, a fishing village in Rathven parish, Banffshire, 2½ miles SW of Buckie, 3¾ E by S of the mouth of the Spey, and 5½ NE of Fochabers. Founded in 1797 by the fourth Duke of Gordon, it ranks as a creek of the port of Banff, and does some trade in exporting grain and importing salt and coals. Its 99 fishing-boats employ 200 men and boys; and its artificial harbour, having fallen into decay in spite of repeated renewals and enlargements, has been superseded by a new harbour, which, formed in 1870-74 at a cost of £15,000 by the Duke of Richmond, comprises two breakwaters, two piers, a quay berthage of 1400 feet, and a basin 3 acres in area. A good water supply was introduced in 1884. Pop. (1841) 457, (1861) 630, (1871) 970, (1881) 737.—*Ord. Sur.*, sh. 95, 1876.

Portgower. See LOTH.

Portincross Castle. See KILBRIDE, WEST.

Port-Kingston. See KINGSTON.

Portknockie, a fishing village in Rathven *quoad civilia* parish, but in Cullen *quoad sacra* parish, Banffshire, on the coast, adjacent to Scar Nose, 1¾ mile NW of Cullen town, and 4½ miles NE of Buckie. Founded in 1677, it carries on fishing in 99 large boats and 42 smaller ones; and has a police station, a chapel of ease, a Free church, and a public school. Seafield chapel of ease, which was built by subscription about the year 1840, and which contains 450 sittings, in 1884 had a district assigned to it as a *quoad sacra* parochial church. Pop. (1793) 243, (1837) 750, (1861) 1159, (1871) 1235, (1881) 1102.—*Ord. Sur.*, sh. 96, 1876.

Portlethen, a fishing village and a *quoad sacra* parish in Banchory-Devenick parish, Kincardineshire. The village stands on the coast, 7 furlongs E by S of Portlethen station on the North-Eastern section of the Caledonian railway, this being 8 miles S by W of Aberdeen. The *quoad sacra* parish, constituted by the court of teinds in 1856, is in the presbytery and synod of Aberdeen. The church contains 460 sittings. Pop. of village (1861) 265, (1871) 315, (1881) 315; of *q. s.* parish (1871) 1789, (1881) 1610.—*Ord. Sur.*, sh. 67, 1871.

Port-Logan, a seaport village on the W coast of Kirkmaiden parish, Wigtownshire, at the head of Portnessock Bay, 14 miles S by E of Stranraer. It has a post and telegraph office, a public school, and a jetty. A circular tidal fish-pond, 10 yards in diameter, has been excavated in the cliffs to the N of the bay, and contains many tame cod and a few 'blockans' or coal fish.—*Ord. Sur.*, sh. 1, 1856.

Portmahomack, a fishing village in Tarbat parish, NE Ross and Cromarty, on the SE side of the entrance to Dornoch Firth, 3 miles SSW of Tarbat Ness, and 9¾ ENE of Tain. It has a post office, with money order, savings' bank, and telegraph departments, 25 fishing boats, and a pier 420 feet long, erected at a cost of £3168. Pop. (1861) 489, (1871) 458, (1881) 301.—*Ord. Sur.*, sh. 94, 1878.

Portmary, an estate, with a mansion, on the coast of Rerrick parish, Kirkcudbrightshire, 7½ miles SE of Kirkcudbright, and 1½ mile S by E of Dundrennan Abbey. The name is said to be modern; but the rock is shown

from which Queen Mary embarked on her flight to England. See DUNDRENNAN and TERREGLES.

Portmoak, a parish of E Kinross-shire, containing Scotlandwell village, 5 miles W of Leslie, and 6¼ (only 4⅛ as the crow flies) E by S of Kinross, under which it has a post office. It is bounded SW by Cleish, W by Kinross, Loch Leven, and Orwell, and on all other sides by Fife, viz., N by Strathmiglo, NE by Falkland, E by Leslie and Kinglassie, and S by Auchterarder and Ballingry. Its utmost length, from N to S, is 5 miles; its breadth, from E to W, varies between 7 furlongs and 4⅝ miles; and its area is 9957 acres, of which 124 belong to a detached farm near Strathendry, surrounded by Kinglassie and Leslie. Loch LEVEN, to the extent of 5 miles along its eastern and its southern shore, margins the parish; the river Leven, flowing in an artificial cut from Loch Leven, goes 1¼ mile east-north-eastward across the interior; and GAIRNEY WATER, running north-north-eastward into Loch Leven, forms for 1 mile the southern part of the boundary with Kinross. From the shore of Loch Leven (353 feet above sea-level) the surface rises southward to flat-topped Benarty Hill (1167 feet) on the Ballingry border, and eastward to Bishop Hill, which culminates near Kinnesswood village in White Craigs (1492 feet), 1⅝ mile ENE of the nearest point of the loch. (See LOMOND HILLS.) All the parts of the parish not occupied by the two hill ridges and their skirts are narrow hanging plains; and the whole is a rich landscape of fine meadows, fertile fields, thriving plantations, beautiful braes, romantic crags, and picturesque sky-lines, exquisitely mirrored in Loch Leven. Copious springs of pure water are numerous in the north; and three within 400 yards of one another, in the neighbourhood of Scotlandwell, emit as much water as, with a suitable fall, would drive a mill. Eruptive rocks are in the hills, and have been worked; sandstone abounds, but is not quarried; limestone is plentiful, and has been calcined to the amount of 4000 tons of carbonate in the year; and ironstone and coal, the former of excellent quality, were mined a number of years ago. The soil of most of the arable grounds is light, early, and exceedingly fertile. About 350 acres are under wood; three-fourths of the entire area are in tillage; and the rest of the land is nearly all pasture. KIRKNESS, noticed separately, is the principal residence; and the ruin of an old chapel at Scotlandwell is the only antiquity. Andrew Wyntoun (*flo.* 1400), the chronicler; John Douglas (d. 1574), the first 'tulchan' Archbishop of St Andrews; and Michael Bruce (1746-67), the poet, were natives of Portmoak; whilst the Rev. Ebenezer Erskine (1680-1754) was its minister from 1703 till in 1733 he founded the Secession at GAIRNEY BRIDGE, where a monument was erected to celebrate the event in 1884. Five proprietors hold each an annual value of £500 and upwards, 19 of between £100 and £500. Portmoak is in the presbytery of Kinross and the synod of Fife; the living is worth £350. The parish church, at Scotlandwell, was built in 1839, and contains 730 sittings. Other places of worship are Portmoak Free church and Balgedie U.P. church. The public school, with accommodation for 162 children, had (1884) an average attendance of 134, and a grant of £113, 5s. Valuation (1860) £10,357, (1882) £11,189. Pop. (1801) 1151, (1831) 1554, (1861) 1450, (1871) 1193, (1881) 1042.—*Ord. Sur.*, sh. 40, 1867.

Port-Monteith. See MONTEITH, PORT OF.

Port-Montgomery. See PORTPATRICK.

Portmore, an estate, with a mansion, in EDDLESTON parish, Peeblesshire, 1½ mile NNE of Eddleston station. Originally part of the Blackbarony estate, it was acquired in the early part of the 18th century by the Earl of Portmore (a title extinct since 1835), and in 1798 was sold to Alex. Mackenzie, W.S., whose grandson, William Forbes Mackenzie (1801-62), represented Peeblesshire for sixteen years, and carried through Parliament the Public House Act of 1852 that bears his name. His son, Colin James Mackenzie, Esq. (b. 1835; suc. 1862), holds 9403 acres in the shire, valued at £4282 per annum. The mansion, a Scottish Baronial edifice, erected in 1850 from designs by the late David Bryce, R.S.A., was destroyed by fire in April 1883, but has since been restored.—*Ord. Sur.*, sh. 24, 1864.

Portnacraig, a village in Logierait parish, Perthshire, on the right bank of the Tummel, opposite Pitlochry.

Portnacroish, a village in Appin district, Argyllshire, on the E side of Loch Linnhe, 14 miles NNE of Oban. Its plain Episcopalian church, St Cross, containing 230 sittings, was built about 1809, and repaired in 1878.

Portnahaven, a village and a *quoad sacra* parish in Kilchoman parish, Islay island, Argyllshire. The village stands at the south-western extremity of Islay, adjacent to the islet and lighthouse of Oversay, at Rhynns Point, 10½ miles NW by W of the Mull of Oa, 15½ SW of Bridgend, and 24 SW of Port-Askaig. It occupies a picturesque, sheltered, rocky nook, on a shore often lashed with tempestuous billows; and has a post office under Greenock, an Established church built at the expense of Government, a Free church, and a new public school. The *quoad sacra* parish was constituted first by the ecclesiastical courts, next in 1849 by the court of teinds, and is in the presbytery of Islay and Jura and synod of Argyll. The minister's stipend is £150. Pop. of village (1871) 411, (1881) 361; of *q. s.* parish (1871) 979, (1881) 860.

Portnessock Bay, a bay on the W side of Kirkmaiden parish, Wigtownshire, measuring 10½ furlongs across the entrance, and 6½ thence to its inmost recess. See PORT-LOGAN.

Portnockie. See PORTKNOCKIE.

Portobello, a town and a *quoad sacra* parish in Duddingston and South Leith parishes, Edinburghshire. A favourite watering-place and a parliamentary burgh, the town stands on the southern shore of the Firth of Forth, 3 miles E of Edinburgh, 3 SE of Leith, and 2½ WNW of Musselburgh. With Leith it is connected with a branch of the North British; and with Edinburgh by the main line (1846) of that railway, by the Edinburgh Suburban railway (1884), and by a tramway 3⅛ miles long, opened in 1875, and doubled in 1881. Prior to 1762 its site and the lands around it were a moorish furzy waste, called the FIGGATE WHINS, of no value whatever for agricultural purposes, and differing from a desert only in the presence of one human dwelling. But in that year they were let to a tenant at a rent equal to £11, 2s. 2¾d. sterling, and a few months afterwards sold to Baron Muir for £1500. Parts of them now began to be feued out at £3 per acre; and so early as 1804 some portions were sub-feued at a perpetual rent of £40 per acre. Even the solitary hut, which was destined to give its name to the town, was built no earlier than 1742. A humble thatched cottage, it stood till 1862 on the SW side of the High Street, on the site now occupied by the old town-hall, an object of interest to the townspeople and of curiosity to strangers. It was long used as a hostelry for travellers on a road which led out from the Fishwives' Causeway, across the whins, towards Musselburgh; and, according to tradition, it was built by a sailor, or marine, who had served under Admiral Vernon in the expedition of 1739, and was called by him Porto-Bello, in memory of his having acted a part in the capture of the town of that name on the Isthmus of Panama. The Figgate Whins bore an evil reputation as a haunt of smugglers and robbers. Scott makes Effie Deans embark here on the smuggling lugger (1736); and in 1753 we find one 'George Hamilton in Portobello' advertising in the *Edinburgh Courant* that he would pay a reward of £3 to any one who should discover the author of a scandalous report representing him as having harboured robbers in his house. In 1765 Mr William Jamieson, the feuar under Baron Muir, discovered near the Figgate Burn a valuable bed of clay; and he erected on the banks of the stream, first a brick and tile work, and afterwards an earthenware manufactory. These public works gave rise to a small village, and co-operated with other and subsequent works to swell the village

into a small town. About the beginning of the century the beauty of the beach, the fineness of its sands, and its general eligibility as a bathing-place, began to draw the attention of the citizens of Edinburgh; and thenceforth many neat dwelling-houses and numerous villas arose for the accommodation of summer visitors, converting the town into a fashionable watering-place. Great as has been the growth of Portobello, that growth is by no means complete, the wide projected extensions of 1876 to the E of Joppa and the S of the railway being still only partly finished, going on, or not even yet begun. In its existing or compact condition the town forms a belt along the firth 7 furlongs in length by from 250 yards to ½ mile in breadth. The principal street extends from NW to SE along the Edinburgh and Berwick highroad, and bears over its NW half the name of High Street. The Figgate Burn intersects the town near its north-western end; the only parts of the burgh on the Leith side of the stream being mainly occupied by brick and bottle works. The High Street sends off at brief intervals, and generally at right angles, 12 or 13 alleys and streets to the beach. Those to the NW are narrow, and belong to the early periods of the town's existence; but those in the middle district, and towards the SE, increase in elegance as the distance recedes from the burn. The principal—mentioning them in regular order—bear the names of Tower, Bath, Regent, Wellington, Melville, Pitt, John, James, and Hamilton Streets. The centre of the town, or what in old times would have been called the Cross, is a point at which Bath Street goes 330 yards north-eastward to the sea, and a spacious beautiful street, called Brighton Place, 400 yards south-westward to the station—Brighton Place being flanked by Brighton and Lee Crescents. So formidable an array of street lines, disposed over so great a space, would seem to indicate no small magnitude of town, and a very considerable amount of population. But much of its area is open ground, much is occupied by garden-plots or villa enclosures, and much is rather a sprinkling of houses separately produced by individual taste or caprice, than a collection of edifices upon any preconcerted plan. Yet most of the newer parts are comparatively regular both in their street lines and in their houses, and promise to combine with future extensions to render Portobello one of the neatest, or even one of the most elegant of second-rate provincial towns in Great Britain. The extensive brick-work which figured so prominently in the origination of the town has contributed much to disfigure it by tempting the construction of many of the houses with brick. But, over by much the greater part of the area, the building material is the same beautiful light-coloured sandstone which gives so pervading a charm to the architecture of the metropolis; and, as the brick edifices decay, it will probably be used for the houses which succeed them, and be allowed the universal adoption it deserves.

The curious Tower which overlooks the beach at the foot of Tower Street is a fantastic pile, built by the eccentric Mr Cunningham, who was one of the earliest subfeuars under Mr Jamieson. Antique carved stones appear in the cornices and the windows, and are alleged to have belonged partly to the Cross of Edinburgh, and partly to the dilapidated ecclesiastical piles of St Andrews. An excellent suite of hot and cold salt-water baths was erected in 1806 at a cost of £4000, between the foot of Bath Street and that of Regent Street. An edifice at the head of Bath Street was once an assembly-room, but is now an inn. A neat town-hall, in a mixed style of French and Flemish, was built in 1862-63 by a limited liability company at a cost of £3000, on the S side of the High Street, to the E of Brighton Place. To the W, on the opposite side of the High Street, are the fine new Municipal Buildings, Scottish Baronial in style, erected in 1878 at a cost of £7000, from designs by Messrs R. Paterson & Son. A principal feature is a three-dialled clock tower, surmounted by a flagstaff; and the town-hall also has its public clock. The fine level sands, 230 yards broad at low-water, on a Saturday afternoon of summer present an animated scene, with the ponies and donkeys, the pleasure boats and bathing-coaches, the throng of holiday-makers, and what not else besides. They are skirted by a smooth esplanade (1860), 1420 yards long, or a little over ¾ mile, midway on which, at the foot of Wellington Street, is the Prince of Wales's Drinking Fountain. In 1870-71 a promenade pier was constructed by a joint-stock company near the foot of Bath Street, at a cost of £7000. It extends 1250 feet into the sea, and is 22 feet broad, or 60 at the head, which is surmounted by a restaurant and an observatory. The pier is a calling place for excursion steamers, and serves not only for promenade concerts, but also for boating and (up to 9 a.m.) for swimming.

The view from the pier-head is one of singular beauty and interest—Inchkeith to the N, and the winding shores of Fife; to the NE, North Berwick Law and a peep of the Bass; to the E, Aberlady Bay, Prestonpans, Musselburgh, and the spire of Inveresk; to the S, the woods of Niddrie, Craigmillar Castle, and the Pentland Hills; and to the W, Arthur's Seat and a glimpse of Edinburgh. See these burnished by setting sun, or silvered by summer moon, and think of their many memories—the Pentlands, or 'lands of the Picts,' and Rullion Green; Inveresk, with its Roman remains; Arthur's Seat, named after the 'Blameless King,' and Edinburgh, after Eadwine of Northumbria; Kinghorn yonder, where King Alexander met his doom; Wilkie's 'ain blue Lomonds;' the battlefields of Pinkie and Prestonpans; Craigmillar, where Queen Mary wept; and Carberry Hill, where she resigned her crown. Nay, on these very sands Prince Charlie arrayed his forces on the eve of the march to Derby; George IV. held a grand review; and Scott composed the Flodden canto of *Marmion*, walking his black horse within the beating of the surge, or going off as if at the charge, with the spray dashing about him.* At Shrub Mount, Portobello, Hugh Miller (1802-56) died by his own hand; and Portobello has been the birthplace or residence of two or three other men of mark—David Laing, LL.D. (1790-1878), antiquary; Prof. Robert Jameson (1774-1854), mineralogist; and Samuel Brown, M.D. (1817-57), chemist and author.

The *quoad sacra* parish church, in Melville Street, is a plain edifice, with a clock cupola, erected in 1810 as a chapel of ease at a cost of £2650, enlarged in 1815 and 1878, and containing 966 sittings. The parish was constituted by the General Assembly in 1834. The Free church, in Hamilton Terrace, Joppa, was built in 1875-77, at a cost of £9000, from designs by Mr John Honeyman, and is a really striking edifice in the Early Decorated style of the close of the 13th century, its only defect being a certain thinness. It consists of an aisled nave, with 660 sittings and traceried stained-glass windows, and of a tower and spire 170 feet high, with a deep-toned bell of 36 cwt. The Windsor Place U.P. church, built in 1879-80, at a cost of £8500, from designs by Messrs Stewart & Menzies, is a less successful Gothic structure, consisting of nave and transepts, with 760 sittings and a NW tower and spire 130 feet high. The Regent Street U.P. church is a very plain but commodious building, reconstructed in 1880 from a previous church. St Mark's Episcopal Church, consecrated in 1828, is an ugly unecclesiastical building, with a heavy Grecian portico, a stained-glass window, and 400 sittings. St John's Roman Catholic church (1835; enlarged 1878; 400 sittings), in Brighton Place, is plain but neat; and the same may be said of the Congregational church in Wellington Street. An Established congregation also worships in the old Town-hall. A beautiful cemetery, nearly 1¼ mile SE of the centre of the town, and 4 acres in extent, was laid out in 1876-77. The new Board School, on the Niddrie road, a little beyond the station,

* On one occasion Sir Archibald Allison, while a member of the Yeomanry Cavalry, after a six hours' drill on Portobello sands, dined, drove 21 miles to a ball, danced all night, drove back, bathed in the sea, and went to another six hours' drill, 'without either being in bed or experiencing the least fatigue.' His right-hand man in the front rank during this mimic war was Lockhart, Sir Walter's son-in-law.

was built in 1875-76 at a cost of £7000, and is a good one-story edifice, semi-collegiate in style, with four classrooms and a central mixed school hall, 54 feet square and 27 high.

The town besides has a post office, with money order, savings' bank, insurance, and telegraph departments, branches of the Clydesdale, National, and Royal Banks, 2 hotels, a gas-light company, a drainage system which cost £11,000, a good water supply from the Edinburgh waterworks, a second railway station at Joppa, a literary institute (1881), a young men's literary society (1859), Liberal and Conservative associations, a choral society, boating, curling, and swimming clubs, masonic and other lodges, etc. It is governed by a provost, 2 bailies, and 6 councillors, who also act as police commissioners under the Act of 1862. By the Reform Act of 1833 Portobello returns one member to parliament, conjointly with Leith and Musselburgh. Its parliamentary and its municipal constituency number 998 and 1368 in 1885. Valuation (1856) £16,843, (1866) £25,196, (1876) £37,861, (1885) £46,075. Pop. (1841) 3587, (1851) 3527, (1861) 4366, (1871) 5551, (1881) 6926, of whom 3863 were females, 6794 were in the parliamentary burgh, 111 were in South Leith parish, and 4504 were in Portobello *quoad sacra* parish.—*Ord. Sur.*, sh. 32, 1857.

Seal of Portobello.

Port of Monteith. See MONTEITH, PORT OF.

Portpatrick, a Wigtownshire village and parish, on the W coast of the Rhinns of Galloway. The village by sea is 21½ miles NE of Donaghadee in Ireland, whilst, as terminus of the Portpatrick section (1861) of the Caledonian railway, it is 7¾ miles SW of Stranraer, 61 W by S of Castle-Douglas, 80½ WSW of Dumfries, 170¼ SW of Edinburgh, and 66½ SSW of Ayr. It lies snugly sheltered in a small triangular opening in the rock-bound coast, the base of the triangle being formed by the sea, and the other two sides by towering cliffs, which in places rise sheer to 130 feet, and behind recede into hills 300 to 400 feet high. The declivities of the amphitheatre at the sides of the little bay are steep and impracticable; and, even behind the town, except where a streamlet has cleft them into a cleugh and ploughed down a path for the highroad and railway, they are sufficiently rapid to give the whole enclosed space the appearance of a vast quarry, or the half of a huge bowl. Neither by land, nor northward or southward by sea, is the town seen until it is almost entered; and from either position, especially from the sea, it wears an aspect of remarkable seclusion. Yet, though the nest in which it sits is almost as bare of embellishment as the bald head of a hill of the hardest primitive rock, Portpatrick basks in a south-westerly exposure, and during high winds from most points of the compass is enviably snug, so that of late years many patients have been recommended by the faculty to seek a shelter here from the keen east winds of spring and early summer. Most of the houses are of recent date; and all are built of native greywacke. The newest and principal street, about 350 yards long, commences near the centre of the basin at the harbour, and, running up towards the gorge or incision in the hill-screen, carries out the road to Stranraer. The street next in importance is bisected by the former nearly in the middle, has a slight curvature in its direction, and overlooks the harbour. Behind are some smaller streets.

The harbour of Portpatrick lies open to winds which blow about eight months in the year, and is exposed to a swell, which sometimes rolls into it with great violence. It was long a mere natural inlet, without any projecting elbow or sheltered recess; and the vessels which frequented it required to be flat-bottomed, and were drawn aground and re-launched at every voyage. But a pier of a kind then thought to be one of the finest in Britain, was built at it in 1774; and a reflecting lighthouse was erected to correspond with one on the opposite coast at Donaghadee. In 1821 an artificial harbour on a grand scale was commenced from designs by Rennie. Its form is nearly that of a horse-shoe; the sides running our into piers, which at the entrance approach within 250 feet of each other. On the S side of the enclosed basin the old pier of 1774 projects inward on a line nearer the land than the centre of the basin; and on the other side is a large rock or skerry rising above the surface of the water, and partially protecting the space within from the wind and swell at the entrance. The harbour is thus divided into an outer and an inner harbour; and the passage from the former to the latter, between the old pier and the skerry, has a width of 105 feet. The dimensions of the entire harbour, outer and inner, are 710 by 495 feet. The depth of the outer harbour is from 4 to 20 feet at low water spring tides; and that of the inner harbour is on the average 6½ feet; but that over a bank in the passage between them is only 2½ feet at low water spring tides. The parapets of the new piers are formed of large blocks of grey limestone from Wales; and that of the southern one terminates in a semicircular sweep, within which rose a handsome lighthouse of the same material, and 46 feet high. Portpatrick, both as a seaport and as a town, owed nearly all its former importance to its commanding the shortest communication from Britain to Ireland. A weekly mail across the channel was established at it in 1662; and a considerable trade with Ireland resulted from the formation of the pier in 1774; so that the importation of cattle and horses rose from 17,275 in 1790 to 20,000 in 1812, to sink again to 1080 in 1837. Four good-sized vessels were also built here, the last in 1790. A great increase of business was expected to arise from the construction of the new harbour and the employment of two steam mail-packets, which transmitted from 8000 to 10,000 letters per diem in 1838, and which in the twelve preceding years conveyed an annual average of 12,000 passengers, besides linens and lime from Ireland, coals from Ayrshire, and cotton goods from Glasgow and Manchester. There was a large custom-house; and troops were often shipped here for Ireland. But the establishment of communication between Glasgow and Belfast, between Holyhead and Dublin, and later, between Stranraer and Belfast, did Portpatrick severe damage, reducing it suddenly to insignificance. The mail ceased to run in 1849; the lighthouse was removed in 1869; and the massive harbour-works, which cost the country £500,000, are lapsing fast to a state of utter ruin. A submarine telegraph cable, from Portpatrick to Donaghadee, was laid on 23 May 1853.

Portpatrick derives its name from the great Apostle of Ireland, who once, according to legend, here crossed the channel at a single stride, and left a deep footprint on a rock that was removed in the formation of the harbour. On another occasion, the savages of Glenapp had cut off his head; but, picking it up, the Saint quietly walked to Portpatrick, plunged into the sea, and, *holding his head in his teeth*, swam safely to the opposite shore. A chalybeate spring bears the name of St Patrick's Well; whilst a pre-Reformation chapel, called Chapel Patrick, stood on or near the site of the old parish church. The babe, St Cuthbert, too, with Sabina, his mother, is said to have crossed from Ireland on a stone currach, and landed 'in Galweia, in that region called Rennii, in the harbour of Rintsnoc,' which Skene identifies with Portpatrick. The barony of Portree, within which were the village and haven of Portpatrick, belonged anciently to the family of Adair of Kilhilt, from whom, about 1608, it passed to Sir Hew Montgomery (afterwards Viscount Airds, in the county of Down). It remained in his family for three generations, and he speedily obtained the erection of the village into a burgh-of-barony, and imposed on it the name of Port Montgomery—a name, however, that never came much into vogue. Hitherto all the lands which constitute the present parish had belonged to the parish of Inch, and were called the Black Quarter of Inch. But in 1628 a charter, granted by Charles I.,

detached them—Portree, Kilhilt, and Sorbies—from Inch, erected them into a separate parish, ordained that a church which was then building should be the parish church, and constituted it a rectory under the patronage of the lord of the manor. Another charter, which was dated two years later, and which suppressed the abbey of Saulseat, granted as endowment for the new parish the unappropriated revenues of the parish churches of Saulseat and Kirkmaiden, which had belonged to the abbey. The ruinous old parish church, built in 1628-29, was a cruciform structure, with a circular central tower, suggestive of defensive purposes. In the churchyard lie 60 of the persons lost in the wreck of the *Orion*, a Glasgow and Liverpool steamer, which occurred in fine weather, ¼ mile N of the 'Port,' 18 June 1850. Portpatrick was long the Gretna Green for Ireland; and the marriages of 198 gentlemen, 15 officers, and 13 noblemen are registered in the kirk-session records for the 50 years prior to 1826, in which year the church courts interfered with the practice. The lowest fee then was £10 to the minister and £1 to the session clerk. The present parish church, built in 1842, is a handsome edifice, with 800 sittings, and a square embattled tower. The plain Free church was built soon after the Disruption. Portpatrick has a post office, with money order, savings' bank, and telegraph departments, a comfortable hotel, and good sea-bathing. Pop. of village (1831) 1205, (1841) 996, (1861) 1206, (1871) 685, (1881) 591, of whom 358 were females. Houses (1881) 125 inhabited, 14 vacant.

The parish is bounded NW and N by Leswalt, NE by Inch, E and SE by Stoneykirk, and SW by the Irish Channel. Its utmost length, from NE to SW, is 4⅝ miles; its utmost breadth is 4 miles; and its area is 9145¼ acres, of which 43 are foreshore and 8 water. The coast, 4⅝ miles in extent, has a general south-south-easterly trend. Over its whole extent it is bold, rocky, and dangerous to navigation, presenting a line of natural rampart, interrupted only by four or five little bays, and comprising a series of cliffs and shelving rocks pierced with caves, torn with fissures, or notched with protuberances, and rising, in many instances, to an altitude of from 100 to 200 feet. The little bays have the capacity, of mere creeks, yet possess pleasant features, and, in a certain degree, or in given winds, afford safe entrance and shelter to vessels. Killantringan Bay touches, or partly forms, the northern boundary; Port Kale and Port Mora, the next bay and a twin one, are 1½ mile to the SSE; and Portpatrick and Castle Bays are respectively 1⅝ and 1 mile from the southern boundary. Port Mora, though separated from Port Kale by only a slender promontory, has a beach entirely different, its composition being of the fine soft sand of freestone, while that of the other's beach is the grit and small boulders of primitive rock. A glen which comes down to the head of Port Mora, and brings to the sea the silvery waters of a brook, is pronounced by the writer of the *New Statistical Account* 'the most picturesque in Galloway;' its stream making 'a very pretty wild waterfall,' and its sides being traversed by walks which are 'very tastefully cut, and connect the two bays with the present mansion-house of Dunskey, situated about a mile distant on the height.' The interior of the parish is all elevated, and attains its greatest altitude about 3¼ miles from the coast. The surface is either hilly or irregularly undulated, exhibiting scarcely any level ground except in a few small tracts of peat moss. Most of the slopes are gradual, but a few are too steep to permit the traction of the plough, and many, especially the loftier ones, are flecked or jagged with bare rock. Most of the hills are tabular, but a few are cupolar or conical. The loftier ones are called the fells of the farms to which they severally belong; and the loftiest of all, Cairnpat (593 feet), is the highest ground in the Rhinns of Galloway, and commands a very extensive and diversified prospect. The prevailing rocks are greywacke, greywacke slate, and alum slate, the first of which is quarried as building material. The soil is almost everywhere moorish or mossy; and where cultivated, it has become a brown mould or a blackish moss, streaked or interworked with a marly clay, taken up by the plough from the subsoil. Mosses abound, and, even on the hill tops, are frequently 6 or 7 feet deep. Nearly three-fourths of the entire area are regularly or occasionally arable; rather less than one-third is waste or pastoral; and about 310 acres are under plantation. The chief antiquity and the chief mansion are noticed under Dunskey. Three proprietors hold each an annual value of more than £500. Portpatrick is in the presbytery of Stranraer and the synod of Galloway; the living is worth £188. The public school, with accommodation for 277 children, had (1884) an average attendance of 129, and a grant of £106, 9s. 6d. Valuation (1860) £4745, (1885) £6587, 5s. 1d. Pop. (1801) 1090, (1831) 2239, (1861) 2189, (1871) 1492, (1881) 1285.—*Ord. Sur.*, sh. 3, 1856.

Portract, an estate, with a mansion, in Holywood parish, Dumfriesshire, near the right bank of the Nith, 3¼ miles SSE of Auldgirth.

Portramsay, a village and a harbour on the NW side of Lismore island, Argyllshire, near its NE end, 10 miles N by E of Oban. The harbour, large and commodious, and affording one of the best anchorages on the Argyllshire coast, is protected by several islets in the offing, and may be entered by any of three different straits between the islets. Strangers, however, must be careful of some neighbouring rocks, scarcely visible at low water, and entirely covered when the tide is up. —*Ord. Sur.*, sh. 45, 1876.

Portree (anciently Kiltaragleann, from Celt. *Kil*, 'a chapel;' *tar*, 'the bottom;' and *gleann*, 'a glen,' meaning the chapel at the bottom of the glen), a parish with a town of the same name in the Skye district of Inverness-shire, and comprehending the central part of the E coast of the island of Skye, as well as the adjacent islands of Raasay and South Rona, which are separately noticed. The portion in the island of Skye is bounded N by the parish of Snizort, E by the Sound of Raasay, S by the parish of Strath, and W by the parishes of Bracadale and Snizort. The total length, from the mouth of Bearreraig river on the N to the source of a small stream rising between Marsco and Beinn Dearg and flowing to the river Sligachan, is 16⅝ miles, and from the extremity of Rona south-south-westward to the same point on the S is 23 miles; the greatest width of the mainland portion, from the river Snizort on the W due eastward along the head of Portree Loch, is 6¼ miles, and to the E side of Raasay in the same line 10⅛ miles; while the total area is 58,974·628 acres, including 336·734 acres of water, 1663·997 of foreshore, and 34·928 of tidal water. Of the total area 15,704·384 acres are in Raasay and 2564·905 in Rona. The coast is mostly rocky, and rises pretty steeply from the sea, while at various points there are lines of cliff. Near the N end is the small Holm Island, and there are several skerries between Portree Harbour and the Narrows of Raasay. The coast-line is indented by several bays, rendering the outline along the E highly irregular. Five miles from the N end is Portree Bay and Loch, 1½ mile wide at the mouth, and extending 2 miles inland; 2¼ miles farther S is the small Tianavaig Bay; and at the narrows of Raasay a promontory juts out with Camas a' Mhor-bheoil on the N and Balmeanach Bay on the S. Opposite Kyle More between the S end of Raasay and Scalpay, is Loch Sligachan, 3 furlongs wide at the mouth and 3 miles deep; while opposite the middle of Scalpay is Loch Ainort, ⅝ mile wide at the mouth and 1⅝ mile deep. Only the NW side of Loch Ainort is in Portree parish, and from the head of the loch the parish boundary line strikes up the burn at Kinloch Ainort, twists southward to the source of a burn that rises between Marsco and Beinn Dearg, and follows that stream to the river Sligachan, down which it passes to the top of Loch Sligachan. From the top of Loch Sligachan it strikes up the Allt Dubh across the road to Portree, and follows the course of the stream to the bend before it again crosses the road, and passes irregularly to the NW, till it reaches the river Snizort at

Achaleathan. It follows the course of the Snizort to Hornisco Burn, and thence turns eastward to the small Loch nam Learg, and then irregularly N and NNE to the middle of Lake Leathan, and thence down Bearreraig river to the sea, the southern two-thirds of Loch Leathan being within the parish. The surface is irregular. In the portion to the N of Portree Harbour it rises from the sea by a steep slope terminating in a bold line of cliff, rising at Sithean Bhealaich Chumhaing to a height of 1286 feet, and again sloping from this inland to a hollow from 250 to 450 feet above sea-level. To the NW of this there is another line of cliff, which, on the border of the parish, reaches a height of 1087 feet at Bealach Mor. In the portion between Portree Loch and Tianavaig Bay it again rises steeply from the shore, and then by a line of cliff to the ridge of Ben Tianavaig (1352 feet) whence it slopes north-westward to Portree Bay and Loch. Round the W and SW sides of Portree Loch it slopes from the loch up to heights of 1367 feet at Beinn na Greine, 1288 at Skriag, and 1300 at Stròc-bheinn, and from these again falls away to the basin of the river Snizort. Between these heights and the lower slopes of Ben Tianavaig is the basin of the Varragill river, and between Glen Varragill and the Narrows of Raasay the ground reaches a height of over 700 feet, and between Glen Varragill and Loch Sligachan heights of 1456 at Ben Lee and 1099 at Meall Odhar Beag. In the W of the peninsula, between Loch Sligachan and Loch Ainort, is Ben Glamaig (2537 feet) and Beinn Dearg Mheadhonach (2094). From these the ground slopes eastward to Gleann Torra-michaig, the upper end of which is 429 feet above sea-level, and then rises again to 922 feet above Moll. Speaking generally, there may be said to be a chain of hills along the coast broken by the sea lochs and another chain inland, the two lines being separated from N to S by the hollows occupied by Lochs Leathan and Fada, Glen Varragill and Gleann Torra-michaig. In the extreme N the drainage finds its way by small streams to Loch Fada and Loch Leathan, and thence by Bearreraig river to the sea. On this river there is a pretty waterfall, as there are indeed on several of the other streams. Between Loch Fada and Portree Harbour the drainage is carried off by the Chracaig and the Leasgeary, which flow into the harbour E and W of the town respectively. In the portion between Portree Harbour and Loch Sligachan the drainage of the portion farthest to the W passes by Glenmore river to the Snizort, that of the centre by the Varragill and its tributaries, to the sea at Portree Loch, or by smaller streams directly into the loch and harbour; that of the district along the coast by a number of small streams direct to the sea, and that of the peninsula between Loch Sligachan and Loch Ainort by small streams to the river Sligachan or direct to the sea. There are a number of small lochs and lochans, but the only ones that need be mentioned are Loch Fada (454 feet; 6 × 2 furl.) and Loch Leathan (438; 6 × 4 furl.) in the N; and Loch Conardan (4 × ½ furl.), ¾ mile SW of Tianavaig Bay. Both lochs and streams afford excellent trout fishing. South of Loch Sligachan, about Ben Glamaig, is a deer forest of about 10,000 acres belonging to Lord Macdonald. Particulars about Raasay and Rona are given in separate notices, and what follows applies to the mainland part of the parish. The soil includes patches of sand, gravel, and clay, but is principally very wet gravel or moss, almost everywhere cold, unkindly, and barren, so that the arable part bears but a very pitiful proportion to the pasture and waste moorland. Ground under coppice or plantation is hardly to be seen except about the town of Portree, as trees will not thrive. The little that is under cultivation is in the hands of crofters, who have a hard struggle for life, and have generally to eke out their scanty means of subsistence by taking part as 'hired-men' in the east coast herring fishing. The townships between Loch Sligachan and Tianavaig Bay are known as The Braes, and the inhabitants of them have, during the last three years (1881-84), earned a somewhat unenviable notoriety for their lawless proceedings in connection with alleged land grievances. The other principal crofter districts are at Sconser, on the S side of Loch Sligachan; at Glenmore, near the centre of the parish on the W side; and Drumuie, 2½ miles NW of Portree. The greater part of the parish is under sheep. The underlying rocks are mostly volcanic, the tract of country between Loch Sligachan and Loch Ainort being occupied by syenite, and that N of Loch Sligachan by greenstone. On the S shore of Loch Sligachan near the centre is a patch of rock of oolitic age, and similar deposits exist on both sides of Portree Bay, and extend in a belt northward from the head of Loch Sligachan, and also northward from Portree Bay. They consist of beds of limestone, shale, and sandstone, and are in many places richly fossiliferous. In the early part of the present century Lord Macdonald tried, but unsuccessfully, to work some veins of lignite. A cave, 3 miles N of the entrance to Portree Bay, and about 5 miles from the town of Portree, bears the name of Prince Charles' Cave, and here, according to the guide books, the prince spent some time in concealment after Culloden; but it is more than doubtful whether he was ever at the place at all, for, according to Flora Macdonald's account, he passed straight from Kingsburgh to Portree, and, after visiting the inn, embarked almost at once for Raasay. On a stream a little to the S of this cave are two small waterfalls. There are some other caves along the coast, but none of importance. The Skye Union Poorhouse is in this parish about ½ mile W of the town of Portree. The principal residences are Portree House and Viewfield House at the town, Lord Macdonald's shooting-box at Loch Sligachan, and Raasay House. The only industry is a small woollen manufactory, started during the destitution in the district about 1850, and the only result as yet of the many proposals to bring the manufacture into the district where the raw material is produced. The fabrics woven are excellent tweeds, plaids, and winceys. The antiquities are confined to a few tumuli, and in 1884 a valuable find of silver coins of the latter part of the 16th and the early part of the 17th centuries took place at Hillside of Woodend. The coins belonged mostly to the reign of James VI., with a few of Elizabeth, and one of Henry of Navarre.

The parish, which was anciently included in Snizort and Kilmuir, was disjoined in 1726. It is in the presbytery of Skye and the synod of Glenelg, and the living is worth £273 a year. The churches are noticed in connection with the town. Under the school board the schools of Braes, Glens, Portree, Raasay, Rona, Sconser, and Torran, with respective accommodation for 90, 27, 180, 30, 30, 50, and 60 pupils, had (1884) an average attendance of 32, 20, 123, 36, 26, 25, and 23, and grants of £14, 17s., £23, 1s. 3d., £110, 6s. 6d., £36, 16s., £25, 10s. 10d., £ ″ , and £27, 16s. In the Braes district there is a school built and endowed with part of a fund of £2050, given by Mr Donald Macdiarmid, of South Carolina, in 1831, for the purpose of erecting and endowing schools at Borve, in Snizort, and Braes, in Portree. The fund belonging to the Braes school is £800, and it is proposed under the Endowed Schools Act to hand the management over to the school board. In the same district there is a mission church, built partly by public subscription and partly by a grant from the funds of the Baird Trust. Lord Macdonald holds almost the whole of the mainland part of the parish, 1 other holds between £500 and £100, 2 hold between £100 and £50, and there are a few of smaller amount. Valuation (1860) £4607, (1884) £8406. Pop. of whole parish (1801) 2246, (1831) 3441, (1861) 3159, (1871) 2928, (1881) 3191, of whom 1485 were males and 1706 females. Of these 2448 (1103 males and 1345 females) were in the mainland portion, including the town of Portree.

Portree Bay opens off the Sound of Raasay almost opposite the middle of the island of Raasay, and is 1½ mile wide at the mouth. From this it extends westward about 2 miles to the town of Portree, and then turns off at right angles southward for over a mile in the portion known as Portree Loch. The shape resembles a stumpy

leg and foot, the foot being formed by the loch. From the N side of the bay a point projects, terminating at Sgeir Mhòr, and from the S side Vriskaig Point stands out a little farther to the W. The portion of the bay to the W of a line drawn between these two points is Portree Harbour, a fine land-locked piece of water, spacious enough to accommodate a large number of vessels, with a depth of from 5 to 6 fathoms, and the bottom, being strong clay, affords excellent holding ground for ships at anchor. At the corner where the bay turns southward there is another point, on which the Established church and part of the town of Portree stands. The upper part—the Loch—is nearly dry at low water. On both sides of the portion running E and W there are picturesque cliffs of volcanic rocks. One reach on the N side somewhat resembles Salisbury Crags on Arthur's Seat at Edinburgh, and those on the S side are pierced at several points of their base by caverns, and at other places recede so as to leave a steep grassy talus between them and the shore. Suidh Fhinn or Fingal's Seat, to the W of Portree Loch, commands from its summit a magnificent view of almost the whole of the western coast of Ross-shire, and of nearly the whole of the Skye and Long Island portions of the Hebrides. The Town of Portree, a post-town and seaport, stands at the point where Portree Bay bends round to the southward, and, though of no great size, gains importance from being the largest seat of population and the chief business centre for Skye and the neighbouring islands, as well as the headquarters of the ever-increasing number of tourists who visit the district every year. *Vid* Dingwall and Strome, the town is 103½ miles W of Inverness, and 32 miles WSW of Strome Ferry; by steamer it is 120 miles NNW of Oban, and 60 miles S by E of Stornoway; and by road 24½ NW of Broadford, 14 SE of Uig, and 23½ E of Dunvegan. The name is a corruption of *Port-an-righ*, the king's harbour, a title which was given when the royal fleet, commanded by King James V. in person, anchored in the harbour on the occasion of the great expedition to the Western Isles in 1540. Other authorities, however, refer the origin of the name, not to the visit of King James, but to that of Haco, King of Norway, when on his Largs expedition. There seems to have been a Columban church in the neighbourhood, for the bay NW of the town was formerly called Loch Columkille; and an islet, with traces of graves and of a small building standing E and W, is called Eilean Columkille. This is possibly the church from which the old name of the district was taken. The site is along a steep acclivity at the north-western corner of the bay, and the description given by Alexander Smith in his *Summer in Skye* (1865) is as applicable then as now:—'Portree folds two irregular ranges of white houses, the one range rising steeply above the other, around a noble bay, the entrance to which is guarded by rocky precipices. At a little distance the houses are white as shells, and as in summer they are all set in the greenness of foliage, the effect is strikingly pretty; and if the sense of prettiness departs to a considerable extent on a closer acquaintance, there is yet enough left to gratify you as long as you remain there, and to make it a pleasant place to think about when you are gone. The lower range of houses consists mainly of warehouses and fish stores; the upper, of the main hotel, the two banks, the courthouse, and the shops. A pier runs out into the bay, and here, when the state of the tide permits, comes the steamer on its way to or from Stornoway, and unlades. Should the tide be low the steamer lies to in the bay, and her cargo and passengers come to shore by means of boats. She usually arrives at night; and at low tide the burning of coloured lights at the mast-heads, the flitting hither and thither of busy lanterns, the pier boats coming and going with illuminated wakes and ghostly fires on the oar blades, the clatter of chains and the shock of the crank hoisting the cargo out of the hold, the general hubbub and storm of Gaelic shouts and imprecations, make the arrival at once picturesque and impressive. In the bay the yacht of the tourist is continually lying; and at the hotel door his dogcart is continually departing or arriving. In the hotel parties arrange to visit Quirang or the Storr, and on the evenings of market-days, in the large public rooms, farmers and cattle-dealers sit over tumblers of smoking punch and discuss noisily the prices and the qualities of stock. Besides the hotel and the pier, the banks and the courthouse already mentioned, there are other objects of interest in the little island town—three churches, a post office, a poorhouse, and a cloth manufactory. And it has more than meets the eye—one of the Jameses landed here on a visitation of the isles; Prince Charles was here on his way to Raasay; Dr Johnson and Boswell were here; and somewhere on the green hill on which the pretty church stands, a murderer is buried—the precise spot of burial is unknown, and so the entire hill gets the credit that of right belongs only to a single yard of it. In Portree the tourist seldom abides long; he passes through it as, a fortnight before, he passed through Oban It does not seem to the visitor a specially remarkable place, but everything is relative in this world. It is an event for the Islesman at Dunvegan or the Point of Sleat to go to Portree, just as it is an event for a Yorkshireman to go to London.' Whatever may have been the case when King James was here, however, it is certain that in Prince Charles' time, and even later, when Dr Johnson and Boswell were here, there was no village, but only an inn, and perhaps a clachan or kirkton, for Boswell says, in 1773, 'Sir James Macdonald intended to have built a village here, which would have done great good;' but though Sir James did not carry out the plan, the village made its appearance in due time under Sir James' successor. To the S of the town a craggy wooded promontory projects into the harbour, and is crowned by an octagonal tower erected by Dr Alexander Macleod in 1834, and commanding a good view. Portree House, belonging to Lord Macdonald, is to the W of the town; and farther W still is the woollen manufactory already alluded to. The quay was erected in 1819, but there is no great depth of water at low tide. The Established church on the promontory already noticed was built in 1825, and contains 800 sittings. There are also Free, U.P., and Episcopal churches, of which the last, St Columba's, is a good Gothic edifice, after designs by Mr Ross of Inverness, erected in 1884 as a memorial to the late Bishop Mackarness. None of the others call for special notice. Skye being one of the judicial divisions of Inverness-shire there is a courthouse, erected in 1867, where the resident sheriff-substitute holds his courts. The district prison, legalised in 1848, was formerly used for prisoners whose sentences did not exceed 60 days, but since the passing of the Prisons Act it has been licensed only for prisoners whose sentence does not exceed 14 days. Instead of the one hotel mentioned by Alexander Smith there are now three, and there are also a post office, with money order, savings' bank, insurance, and telegraph departments, under Dingwall, branches of the Caledonian, National, and North of Scotland Banks, a National Security Savings' Bank, and agencies of 11 insurance companies. Portree is one of the polling stations for Inverness-shire. The sheriff court is held for both ordinary and small debt cases every Thursday during session. There are cattle fairs on the last Tuesday of May and the third Tuesday of August. Communication is maintained with the mainland by the Highland Railway Company's steamer between Portree and Strome Ferry every day during the summer months, and in winter three times a week, while the Glasgow and Stornoway steamers call thrice a week both summer and winter. The principal imports are miscellaneous goods; and the principal exports are sheep, cattle, wool, salt herring, salmon, and cod and ling salted and dried. Pop. of town (1861) 679, (1871) 731, (1881) 893, of whom 396 were males and 497 females. Houses, 111 inhabited, 5 uninhabited, and 1 building.

Port-Seton. See Cockenzie.

Portskerra. See Melvich.

Port-Sonachan. See Kilchrenan.

Portsoy, a seaport and burgh of barony in Fordyce parish, Banffshire. It was formerly the terminus of the Grange and Portsoy branch of the Great North of Scotland railway system, but is now one of the chief stations on the loop line of the same system, which was constructed in 1883-85, and which passes from Keith by Portsoy, Cullen, and Buckie to Elgin. By rail it is 8½ miles W of Banff, 13¼ NE of Grange, 17⅞ NE of Keith, and when the new line is finished it will be about 5½ miles E of Cullen, 11 E of Buckie, and 24½ E by N of Elgin. By road it is 18 miles ENE of Fochabers. It stands on a point of land on the W side of the little estuary of the Soy Burn, which carries off the surplus water from the Loch of Soy—now sadly encroached on by the railway—and from which the place takes its name. On the SE side the Burn of Durn enters the sea at the Back Green. The town is of some antiquity, and was in 1550 constituted by Queen Mary a burgh of barony holding of Sir Walter Ogilvie of Boyne, and with all the usual privileges, and the charter was ratified by Act of Parliament in 1581. The present superior is the Earl of Seafield. As might be expected from its age the town is very irregularly built, and many parts of it have a very quaint appearance. There seems to have been a castle at one time, but there is no record of it, and its existence is only inferred from the place once known as the 'Castle Brae.' Of an ancient church dedicated to St Columba, which stood at the Aird, 'hard by the toune where now [1724] is a large meeting-house lately buildit,' no trace now remains, though the Aird still exists; and even where the meeting-house was is not exactly known, though it is supposed to have been the Episcopal church which was destroyed by Cumberland's soldiers in 1746, and seems to have stood between the house and mill of Durn. There is a well still known as St Colme's or St Comb's Well. The district was constituted a preaching station in connection with the Established Church in 1741; and a chapel of ease was constituted in 1836, and became a *quoad sacra* charge in 1871. The church, which was built in 1815, was greatly improved in 1881, a clock tower having been previously erected by public subscription in 1876. The clock and bells in this were the gift of Mr F. P. Wilson, a native of the town, who had made a considerable fortune by his commercial enterprise abroad. The original church bell, now at the school, bears the inscription, 'For the use of the Presbyterian Church, Portsoy. John Spicht, Rotterdam, 1746.' The bell which succeeded it is lying unused in the present clock tower. The Free church, built soon after the Disruption, and rebuilt with a handsome spire in 1869, has 456 sittings. The U.P. church, built in 1866, has 400 sittings. The Episcopal church (St John the Baptist), built in 1841, has 150 sittings. The sacramental plate belonged to the old church already mentioned as burnt in 1746. The Roman Catholic church of the Annunciation, erected in 1829, has 150 sittings. None of them call for more particular notice. Under the school board of Fordyce, the public, female public, and female industrial schools, with respective accommodation for 360, 157, and 90 pupils, had (1884) an average attendance of 295, 84, and 57, and grants of £281, 16s. 6d., £74, 13s., and £41, 13s. The cemetery on the sloping ground SE of the town was originally opened about 1728, and was extended in 1874. It contains a monument to Miss Bond, a native of Fortrose, who in 1814 published a book called *Letters of a Village Governess*, giving some curious pictures of life in a country village at the beginning of the present century. She died at Portsoy in 1839. The serpentine and associated minerals for which the place was long famous have been noticed under Fordyce. An excellent harbour was formed by the Earl of Seafield in 1825-28, but was destroyed by storms in January 1839. During the present year (1884) the old channel has been cleared out, and the works then constructed restored at a cost of about £12,000, concrete being used instead of stone. There is now accommodation for 12 vessels of 100 tons, and a depth of 11 feet at high water of stream tides and of 9 feet at neap tides, the basin being tidal. Portsoy ranks as a creek under Banff, and the few ships belonging to the port have an average tonnage of under 100 tons. The chief imports are coals coastwise and bones from the Baltic, and the principal exports grain, herring, and potatoes. There were belonging to the port in 1882, 32 first-class herring fishing boats, 4 second-class boats, and 20 third-class boats, employing 108 resident fisher men and boys. On an average from 40 to 50 boats prosecute the fishing from Portsoy harbour, and 52 thus engaged in 1883 had a total catch of 5720 crans. The other industries in the town are a small ropework and a bone mill, and in the neighbourhood there are a wool mill, and Glenglassaugh distillery, where there are extensive buildings, erected in 1873-75 at a cost, including fittings, of about £10,000. Trade has considerably increased since the railway was originally opened, and will probably be developed still more by the new line and the improved harbour accommodation. There is a coastguard station, a post office, with money order, savings' bank, and telegraph departments, under Banff, branch offices of the North of Scotland and Union Banks, agencies of 10 insurance companies, two hotels, a Young Men's Christian Association with a library, a reading and news room, and a newspaper, the Independent *Banffshire Reporter* (1856), published on Saturday. In the neighbourhood is Durn House, associated with the early days of Ferguson the astronomer. The only distinguished native is the Rev. Peter Thomson, Free Church minister of St Fergus, who died in 1880 at the beginning of what promised to be a very brilliant career. The story of his life has been told in *A Scotch Student* (Edinb. 1881). Pop. of town (1841) 1720, (1861) 1903, (1871) 1822, (1881) 2090, of whom 916 were males and 1174 were females. Houses 504 inhabited, 13 uninhabited, and 4 building. The *quoad sacra* parish is in the presbytery of Fordyce and synod of Aberdeen. Pop. (1881) 2313.—*Ord. Sur.*, sh. 96, 1876.

Port-Wemyss, a village on the coast of Kilchoman parish, Islay island, Argyllshire, 14¾ miles SW of Bridgend.

Port-William, a small seaport in Mochrum parish, SE Wigtownshire, on the E side of Luce Bay, 7 miles WNW of Whithorn, 6¾ SW of Whauphill station, 11 SW of Wigtown, and 24 SE of Stranraer. Founded about 1770, by Sir William Maxwell of Monreith, in honour of whom it is named, it chiefly consists of a terrace-line of cottages, well built, slated, and fronting the sea, and has a neat appearance. In 1788 a small barrack-house was erected for the accommodation of military, and of custom-house officers occasionally sent for the suppression of smuggling. The harbour, though small, is safe, and sufficiently commodious. On all sides but the S, it is well-sheltered by the land; on the S, it is defended by a artificial rampart or strong wall; and it easily admits vessels of 200 tons burden. The principal trade consists in the exportation of agricultural produce to England. The village has a post office, with money order, savings' bank, and telegraph departments, a branch bank of the British Linen Co., 4 hotels, excellent sea-bathing, a good bowling-green, a masonic lodge, a Free church, a U.P. church, and a public school of recent erection. Pop. (1792) 210, (1841) 634, (1861) 884, (1871) 829, (1881) 755.—*Ord. Sur.*, sh. 4, 1857.

Possil House, a quondam mansion in Maryhill parish, Lanarkshire, 2 miles N of the centre of Glasgow. It was a large but plain edifice, whose finely wooded grounds had a quiet secluded aspect, but about 1872 they were laid out as the site of a new Glasgow suburb called Possil Park. Possil was for many years the home of the historian, Sir Archibald Alison (1792-1867). Here he died, and here in 1848 he received a two days' visit from Charles Dickens. See his *Autobiography* (1882).—*Ord. Sur.*, sh. 30, 1866.

Posso. See Manor.

Potarch. See Birse and Kincardine O' Neil.

Pot of Gartness. See Gartness.

Poundland, a village in Colmonell parish, Ayrshire, on the right bank of the Stinchar, 8 miles S of Girvan.

Pow, any one of numerous sluggish rivulets or stagnant burns in marshy or alluvial districts of Scotland. The name is an Anglicised or softened form of the Gaelic *Poll*, and the Cymric *Pwl*, signifying 'a pool, a ditch, a stagnating stream, or a marshy place;' and it correctly describes nearly all the streams to which it is applied.—A pow, called the Pow of Cummertrees, traverses the western side of the Howe of Annandale, from near the northern extremity of Dalton, through that parish and the parishes of Ruthwell and Cummertrees to the Solway Firth, 2¾ miles W of the mouth of the river Annan; is joined, on its left bank, 4½ miles from its source, by an overflow or feeder from the river Annan; seems, from the junction of that overflow onward to its mouth, to run in the ancient channel of the Annan; and has a total course, chiefly in a south-south-easterly direction, of 8 miles.—A pow in Forfarshire is formed by numerous headstreams in Monreathmont Moor, principally within Guthrie parish; drains the parishes of Guthrie, Kinnell, and Farnell, 7½ miles north-eastward to the South Esk, 1½ mile above Montrose Basin; aspires to be called Pow Water; and imposes names, such as Pow-side, Pow-mill, and Pow-bridge, on various objects on its banks.—A pow in Perthshire rises in some mosses below Methven; runs mainly along a ditch or artificial canal, formed to drain off its stagnant and marsh-making waters; pursues a sluggish course of 11 miles to the Earn, near Innerpeffray; and is noted in some doggerel song well known in the country around it.—A pow in Kirkcudbrightshire rises, under the name of Glaisters Burn, in Kirkgunzeon parish; circles round the N end of the Criffel range of hills; traverses one lake, and receives the superfluent waters of another; goes eastward through Newabbey parish, assuming there the name of Newabbey Pow; has a total course of 15 miles; glides into the estuary of the Nith 8 miles S of Dumfries; and is navigable for a short way by small vessels.—A pow in the Carse of Stirling rises near Bannockburn House in St Ninians parish; goes 8 miles eastward to the Forth, at a point 1¼ mile E of Airth village; and, like the Forfarshire Pow, gives name to various seats and other objects on its banks.—A pow in the Upper Carse of the Forth drains part of Kippen parish, and is distinctively called the Pow of Glinns.—A pow in the low grounds of Kyle, in Ayrshire, is formed by three or four headstreams, and goes to the Firth of Clyde at a point 3¾ miles N of the mouth of the river Ayr.—An eighth pow, in Edinburghshire, has been noticed as the JORDAN; and there are several others too unimportant to require special mention.

Powfoot or **Queensberry**, a small watering-place in Cummertrees parish, Dumfriesshire, on the Solway Firth, at the mouth of Pow Water, 4 miles WSW of Annan.

Powfowlis House, a modern mansion in Airth parish, Stirlingshire, near the shore of the Firth of Forth, 5¾ miles NNE of Falkirk.

Powmillon Burn, a rivulet of East Kilbride, Glassford, and Avondale parishes, Lanarkshire. It rises near Greenside, and runs 7 miles north-eastward and south-eastward, till, after passing through Strathaven, it falls into Avon Water, 1 mile E by S of that town.—*Ord. Sur.*, sh. 23, 1865.

Powrie, an estate, with an old castle, in Murroes parish, Forfarshire, 3 miles NNE of Dundee. The castle was long the residence of the ancient family of FOTHRINGHAM, who acquired the lands of Wester Powrie in the reign of Robert III. (1390-1406).

Powsail Burn. See DRUMMELZIER.

Powtrail Water, a head-stream of the river Clyde in Crawford parish, Lanarkshire. It rises on the northern side of Scawd Law (2166 feet) at an altitude of 1900 feet, close to the Dumfriesshire boundary; runs 7 miles north-north-eastward to a confluence (970 feet) with Daer Water, at a point 2¾ miles S of Elvanfoot station; and brings down the Roman or 'Wellpath' road from Nithsdale to Clydesdale.—*Ord. Sur.*, sh. 15, 1864.

Poyntzfield House, a mansion in Resolis parish, Cromartyshire, 3½ miles S of Invergordon, under which there is a post office of Poyntzfield. Its owner, George Mackenzie Gun Munro, Esq. (b. 1862; suc. 1869), holds 1776 acres in the shire, valued at £1371 per annum.—*Ord. Sur.*, sh. 94, 1878.

Premnay, a parish in Garioch district, Aberdeenshire, containing, close to the northern boundary, Insch station on the Great North of Scotland railway, 13¼ miles SE of Huntly and 27½ NW of Aberdeen. Containing also Rothney and Auchleven villages, it is bounded NW and N by Insch, NE and E by Oyne, S by Keig, and W by Leslie. Its utmost length, from N to S, is 3⅞ miles; its utmost width, from E to W, is 3¼ miles; and its area is 5432¾ acres, of which 1¾ are water. The drainage is carried eastward towards the Ury by GADIE Burn, traversing the interior, and the Shevock, tracing the northern boundary. Along Gadie Burn the surface declines to 400 feet above sea-level; and thence it rises westward and southward to 754 feet at Westfield, 747 at Waukmill Hill, 834 at Tillymuick, 999 near Hillhead, 927 at Brackla Hill, 1412 at Black Hill, 1564 at Hermit Seat, and 1619 at the Watch Craig at the SE corner of the parish. The three last heights all culminate right on the southern boundary, and the last is a summit of broad-based BENNOCHIE. Red or pink granite, of a kind easily worked and well suited for all sorts of building purposes, abounds to the S of Gadie Burn, and clay-slate to the N; whilst serpentine forms a bed 200 yards W of the parish church. The soil on the banks of Gadie Burn is various, but on the left bank is generally sharp and good; whilst along the foot of Bennochie is wet and cold. A few acres are under small plantations; rather more than 3000 acres are arable; and nearly all the rest of the land is pastoral or waste. There are Druidical remains at Druidstone, and a circular camp at Tillymuick. Lickleyhead Castle (1629) was restored about 1876, and is let to a shooting tenant; but the former mansion of Overhall is still a farmhouse. Auchleven has a small woollen factory. The property is divided among four. Premnay is in the presbytery of Garioch and the synod of Aberdeen; the living is worth £180. The parish church, 2 miles SSE of Insch station, was built in 1792, and, as enlarged in 1828, contains 360 sittings. Leslie and Premnay Free church stands 2⅝ miles to the W, close to the Leslie boundary. The public school, with accommodation for 120 children, had (1884) an average attendance of 69, and a grant of £48, 11s. Valuation (1865) £3572, (1885) £4438, 8s. 4d., *plus* £588 for railway. Pop. (1801) 486, (1831) 625, (1861) 916, (1871) 997, (1881) 930.—*Ord. Sur.*, sh. 76, 1874.

Preshome. See RATHVEN.

Pressmennan, Loch. See STENTON.

Preston, a village in Prestonpans parish, Haddingtonshire, ½ mile S by E of the town of Prestonpans, and near Prestonpans station on the North British railway. It got its name from being a *priests' town* of the monks of HOLYROOD and of NEWBATTLE, both of which fraternities had lands adjoining it; and, with Prestonpans, it figures prominently in traditional tales respecting their character and mercantile achievements. Both its relation to the monks, and its position on the great road of a former period, occasioned it to be frequently visited by the Scottish princes. It was formerly noted also for a fair, held on the second Thursday of October, and called St Jerome's Fair. The chapmen or travelling merchants of the Lothians had, at a period when their craft was one of no small importance to the country, formed themselves into a regular guild; and they annually attended this fair to elect their office-bearers for the following year. In a garden at the side of the road, near the E end of the village, stands, in the centre of what till last century formed a large open square, an elegant cross (1617), to the privilege of holding their annual meetings at which they laid claim—a stone pillar about 15 feet high, surmounting a small octagonal erection 9 feet in height. Till a comparatively recent date a social fraternity, styled the Chapmen of the Lothians, and chiefly composed of Edinburgh citizens, has been in the way of annually giving an

imaginary report of their extensive transactions; and more than once has the present minister of Prestonpans, since his election as their honorary chaplain forty years ago, heard this report with facetious accompaniments given from the cross by one of the magistrates or other civic dignitary of the metropolis.

N of the village stands, in a ruinous condition, a venerable tower which Sir Walter Scott supposed to have been originally a fortalice of the Earls of Home, when they bore an almost princely sway over the SE of Scotland, and which, for a long time after the close of the 14th century, when the circumjacent barony came by marriage into the possession of the Hamiltons of Fingalton and Ross, was the seat of that family, the principal one of their name, and afterwards called the Hamiltons of Preston. The seat or castle, of which the ruined tower is but a vestige, was burned by the Earl of Hertford in 1544, by Cromwell in 1650, and by accident in 1663, and was then abandoned. The Hamiltons are represented by Sir William Hamilton, Bart., whose father, Sir William (1791-1856), the learned Professor of Logic, reacquired the ruined tower and the garden around it in the early part of the present century. Figuring in history as staunch partisans of the cause of civil and religious liberty, they afforded marked protection to Mr John Davidson, the eminent confessor and 'Scottish worthy;' and, in the stirring times of the ecclesiastico-civil war, Robert Hamilton, the brother of Sir William of Preston, led the Presbyterians in the actions of Drumclog and Bothwell Bridge.

To the E of the cross, and within the enclosure surrounding what was, till lately, Dr Schaw's (now Miss Murray's) Hospital, are the remains of the ancient manorial residence of Lord Grange, whose wife, by his connivance, was carried off and clandestinely confined for years in the island of St Kilda. This, 'Preston House,' was built after the Hamiltons had abandoned the 'venerable tower,' and was never occupied by any of them. What remained of the estate of Preston after the Revolution was, owing to the representative of the Hamilton family declining to take the oaths to the Revolution sovereigns, transferred to a nephew of Hamilton, under a private arrangement for redemption should a covenanted sovereign come to the throne. It was for this nephew, Sir James Oswald, Lord Provost of Edinburgh, or his son who shortly thereafter succeeded him as laird, that Preston House was erected. The estate, however, being heavily burdened, the whole was, shortly after the beginning of the 18th century, disposed of, and coming before 1715 into Lord Grange's hand he made up titles to it on purchasing the various bonds, and he occupied the house in that year, when his elder brother, the Earl of Mar, was heading the rebellion. After Lord Grange's time it had a succession of owners, till acquired by Dr James Schaw before 1780, and occupied by him till his death, when by his will it was destined for the accommodation, maintenance, and education of poor boys. It was thus used till 1832, when a new and commodious house, in the old English style, was built, at a cost of nearly £3000, within the park near by. And this again, the Schaw funds being otherwise appropriated in 1881 under the Endowed Hospitals Act, has been recently rented by Miss Murray's trustees for the charitable upbringing and training of girls for domestic service, of whom there are already 40 in the institution.—*Ord. Sur.*, sh. 33, 1863.

Preston or **Prestonmill**, a village in Kirkbean parish, SE Kirkcudbrightshire, 14 miles S of Dumfries, under which it has a post office. See KIRKBEAN.

Preston. See BUNKLE.

Prestonfield, a mansion in DUDDINGSTON parish, Edinburghshire, at the southern base of Arthur's Seat, ¼ mile SW of Duddingston Loch, and 2 miles SE of Edinburgh Post Office. It was built in 1687, from designs by the celebrated Sir William Bruce of KINROSS, on the site of the former mansion of 'Priestfield,' which had been burnt by the Edinburgh students in the No Popery riot of 11 Jan. 1681, its owner, Sir James Dick, Bart., being then Lord Provost. A grandson of Sir William Dick of Braid (see CRAIG HOUSE), he had purchased the estate from Sir Thomas Hamilton, and at his death, in 1728, was succeeded by his daughter Janet, the wife of Sir William Cunyngham, Bart. of CAPRINGTON. Her son, Sir Alexander Dick, third Bart. (1703-85), was an eminent physician, and an intimate friend of Dr Samuel Johnson, who visited Prestonfield in 1773; and his son, Sir William (1762-96), is mentioned in Lord Cockburn's *Memorials* as 'a great sportsman, handsome, good-natured, and a first-rate skater. We were the only boys at liberty to play in his grounds, and to use his nice boat. . . . All between Duddingston Loch and the house was a sort of Dutch garden, admirably kept. . . . A very curious place.' Sir Robert Keith Dick, seventh Bart., in 1829 succeeded his cousin-german, Sir William Cunyngham, in the Caprington baronetcy; and his grandson, Sir Robert Keith Alexander Dick-Cunyngham (b. 1836; suc. 1871), is thus ninth and seventh Bart. since 1707 and 1669. He holds 228 acres in Midlothian, valued at £1759 per annum.—*Ord. Sur.*, sh. 32, 1857. See John Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Prestongrange, a Scottish Baronial mansion in Prestonpans parish, Haddingtonshire, near the coast, and 1½ mile SW of the town. Part of it dates from the 16th century; but large additions, including a massive tower, were made in 1830 and subsequently. Robert de Quincey, Earl of Winchester, in 1184 bequeathed the estate to NEWBATTLE Abbey; and, after the death of the first Earl of Lothian in 1609, it was disposed of to John Morison, whose son, Sir Alexander Morison, Knt., as a Lord of Session assumed the title of Lord Prestongrange (1626-31). So did the Lord Advocate, William Grant, who purchased the property in 1746, and whose second daughter married Sir George Suttie of BALGONE. Her great-great-grandson, Sir George Grant-Suttie, seventh Bart. since 1702 (b. 1870; suc. 1878), holds 8788 acres in the shire, valued at £10,958 per annum.—*Ord. Sur.*, sh. 32, 1857. See John Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Preston Hall, a mansion in Cranston parish, E Edinburghshire, near the right bank of Tyne Water, 1¼ mile N by E of Ford, and 4½ miles E by S of Dalkeith. A splendid classical structure, it consists of a centre and two wings, connected by lower buildings, and was erected towards the close of last century by W. Adam for General Lord Adam Gordon, whose mother, the Dowager Duchess of Gordon, had purchased the estate in 1738 for £8877. The present proprietor, Henry Callander, Esq. (b. 1862; suc. 1865), holds 4869 acres in the shire, valued at £6865 per annum.—*Ord. Sur.*, sh. 33, 1863. See John Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Prestonhall, a mansion in Cupar parish, Fife, near the left bank of the Eden, 1 mile ENE of the town.

Prestonhaugh. See PRESTONKIRK.

Prestonholm, a village in Cockpen parish, Edinburghshire, on the South Esk river, 3½ miles SSE of Lasswade.

Preston House, a mansion in Linlithgow parish, Linlithgowshire, 1¼ mile S of the town.

Prestonkirk, a parish of Haddingtonshire, containing the town and station of East LINTON, 5¾ miles WSW of Dunbar, and 23½ E by N of Edinburgh. Called the Halch, Hauch, or Haugh in the time of Gawin Douglas, since the Reformation it received the name, first of Prestonhaugh, then of Prestonkirk, and in legal documents is still designated 'Prestonhaugh, otherwise called Prestonkirk;' whilst its popular name is often briefly Linton. It is bounded N by North Berwick, NE by Whitekirk, E by Whitekirk and Dunbar, SE by Stenton, S by Whittingham, SW by Morham and Haddington, and W by Athelstaneford. With a somewhat irregular outline, it has an utmost length from NNW to SSE of 4¾ miles, a varying breadth of 3 furlongs and 4¼ miles, and an area of 7088½ acres, of which 13½ are water. The TYNE has here an east-north-easterly course of 4½ miles, for the first 7 furlongs along the Haddington boundary;

and the East Peffer Burn flows east-north-eastward across the northern interior and along the Athelstaneford and Whitekirk borders. In the E where the Tyne passes off from the parish, the surface declines to 75 feet above sea-level; and N of the river it nowhere exceeds 281 feet; but in the S is conical Traprain Law (700 feet), which figures conspicuously over a wide extent of landscape. The predominant rocks are claystone, clinkstone, and limestone, and the first is often porphyritic, abounds in crystals of felspar, and contains in places veins of yellow jasper, and of heavy spar. The soil near the Tyne is mostly sandy and gravelly; in the N is argillaceous, partly very stiff; and in the S is calcareous. But a small proportion of land is under wood; about 200 acres are pasture; and nearly all the rest of the parish is in tillage. The chief antiquities are noticed under Hailes Castle and Traprain Law. Sever stone coffins have been turned up by the plough; a standing stone is said to mark the grave of a Saxon commander; the site is pointed out of the ancient parish church, dedicated to St Baldred, and mentioned in record of the 9th century; and ruins exist of an ancient monastery on Markle farm. St Balthere or Baldred, who died in 756, and who was the patron saint of the parish, is said to have dwelt here, and to have founded the earliest church. He is commemorated in the name of an excellent spring, St Baldred's Well, and in the name of an eddy in the Tyne, St Baldred's Whirl. Gawin Douglas (1474-1522), the translator of Virgil, was 'parson of Hauch' (not Hawick), previous to becoming Bishop of Dunkeld in 1516. Mansions noticed separately are Smeaton House and Phantassie; and 8 proprietors hold each an annual value of £500 and upwards, 2 of between £100 and £500. Prestonkirk is in the presbytery of Dunbar and synod of Lothian and Tweeddale; the living is worth £395. The churches and the public school have been described under East Linton. That school, with accommodation for 464 children, had (1884) an average attendance of 231, and a grant of £212, 13s. 6d. Valuation (1860) £15,550, (1885) £16,850, 0s. Pop. (1801) 1741, (1831) 1765, (1861) 1960, (1871) 1931, (1881) 1929.—*Ord. Sur.*, sh. 33, 1863.

Prestonmill. See Preston, Kirkcudbrightshire.

Prestonpans, a coast town and parish of W Haddingtonshire. The town, extending ⅗ mile south-westward along the shore of the Firth of Forth, is 2½ miles ENE of Musselburgh, 8 E of Edinburgh, 1¾ NW of Tranent, 9¾ W of Haddington, and ⅘ NNW of Prestonpans and Tranent station on the North British railway. It is supposed to have become a seat of population for the manufacture of salt so early as the 12th century. The monks of Newbattle, who pushed their trading enterprises in all directions from their property of Prestongrange, appear to have adopted and cherished Prestonpans as the scene of their salt-making operations; and they probably secured for it a rude but abundant prosperity so long as it was under their influence. Even for generations after the Reformation it continued to thrive, and to be a flourishing seat of various sorts of the hardier orders of industry. But chiefly in consequence of the repeal of the salt duty in 1825, the town lost its ancient sources of support, and fell into decay. Its deserted salt-works, some of them contiguous to it, others along the coast, form a rueful feature in the landscape. The masonry in these buildings looks as if it had withstood the buffetings of ages; the woodwork is comparatively fresh and uninjured; and yet the whole aspect is ruinous and forlorn. Numbers of the doors still show brass excise padlocks, bearing the now almost forgotten initials 'G. R.' The town itself, too, has a somewhat decayed appearance. It consists principally of a single street following the line of the beach. A rill runs across the roadway, cutting off from the W end of the street an ugly suburb called Cuittle or Cuthill. The houses have a blackened, time-worn appearance; scarcely any two of them stand in a line; and the whole town, which was so built for defensive purposes, has been described as 'zig-zag at both ends and crooked in the middle.' The parish church stands on a rising-ground above the town, and, dating from 1595, was partially rebuilt and reseated, with double galleries, in 1774. Within the churchyard there are several interesting memorial stones or tablets over the remains of Lords Cullen, Prestongrange, and Drummore; Captain Stewart of Physgill, who fell in the battle of Prestonpans; a brother of General Roy's; and others. A new Free church was built in 1878; and a new public school in 1881, at a cost of £3000. A monument to Dr Thomas Alexander, C.B., the director-general of the medical department of the British army, was erected in 1862, and consists of a stone statue 8½ feet high, on a square pedestal 6½ feet high, within an enclosure immediately N of the church.

Prestonpans and the neighbouring villages used to supply all the east of Scotland with salt. This part of the coast, owing to the absence of large rivers, is favourably situated for the production of salt; and being in the immediate vicinity of very extensive coal-fields, it possessed great facilities for carrying on a large and lucrative salt-trade. Ten salt-pans belonged to the town, and were capable of producing between 800 and 900 bushels of salt per week; and there were others in the neighbourhood of similar extent. In the five years preceding 1792, the annual average amount of salt delivered in the Prestonpans collection was 83,471 bushels, about half of which was produced by the town's own pans, while the rest was produced by pans in the vicinity. A race of females known as salt-wives, and second in notoriety only to the fishwives of Fisherrow and Newhaven, used to carry the salt in creels for sale in Edinburgh and other towns. A manufactory of sulphate of soda, and of sulphuric, nitric, and muriatic acids, once employed upwards of 50 men, but has long since been abandoned. Extensive potteries, commenced about the middle of last century, employed about 40 men and upwards of 50 boys; but after the close of the first quarter of the present century, they degenerated into a small manufactory of brown and white ware. Two brick and tile works long sent forth a steady produce of roofing-tiles over the country; but they have been, to a considerable extent, superseded by the works of the Prestongrange Coal and Iron Co., for bricks, tiles, and every description of fireclay goods. The large brewery of Messrs John Fowler & Co. has been long at work, and has enjoyed extensive fame for the good quality of its ales. A soap-work is among the most recent of the town's considerable manufactories; but for years a chief employment and traffic of the town has been the fishing and exportation of oysters. The largest and fattest of the oysters were formerly taken nearest the shore, and have long been in high esteem as Pan-door or Pandore oysters—a name whimsically given them from the oyster-bed lying off the doors of the salt-pans. The oyster-beds of Prestonpans, or 'scalps' as they are called, extend about 6 miles into the firth, and rather more than 3 miles from E to W; and in the latter part of last century, they yielded a daily produce to dredgers of from 400 to 600 oysters in the day, which were sent not only to Scottish markets, but to Newcastle, Hull, and London. Now, however, they appear to be much less prolific than then. As the oysters spawn in May, and are in a sickly state till August, the proper dredging season begins on the first day of September and ends on the last day of April, continuing, as it is said, 'during the months in which there is an R.' The fishermen, while employed in dredging them, sing a peculiar air, which is said to be of Scandinavian origin, and has a very peculiar and striking effect when borne over the waters by fitful gusts of wind. At the E end of the town, close to the beach, is situated the colliery of Preston Links; which, after half a century's successful working by the Messrs Grieve, was discontinued towards the close of 1884, as being no longer profitable. The commerce of the town, through its port of Morison's Haven, a little way W of Cuthill, was great in the days of its manufacturing prosperity. The harbour, formed under a charter from the monks of Newbattle in 1526, and styled Acheson's

Haven, from the name of its original owner, Alexander Acheson, ancester of the Earl of Gosford in the Irish peerage, was once a custom-house port, whose range included all creeks and landing-places between the mouth of the Figgate Burn at Portobello and the mouth of the Tyne near Dunbar; and it had the right of levying customs and the various sorts of dues to the same extent as those exigible at Leith. All the western portions of Preston and Prestonpans towns and the adjacent hamlets are included within the barony of Prestongrange; and all the eastern portions of these towns and the adjacent villas and ancient mansions are within the barony of Preston, whose ancient cross, bearing date 1617, is still a conspicuous central object of interest. The town of Prestonpans is now a police burgh under the General Police and Improvement Act (Scotland) of 1862. It has a post office, with money order, savings' bank, and railway telegraph departments, a branch of the Royal Bank, an hotel, and a gas company. Pop. of town (1841) 1659, (1851) 1640, (1861), 1577, (1871) 1790, (1881) 2265, of whom 1069 were females, and 1610 were in the police burgh. Houses (1881) 486 inhabited, 75 vacant.

In 1591 John Fian or Cunningham, schoolmaster at Prestonpans, was tried as one of the North Berwick warlocks, and after suffering the cruelest tortures, was condemned and burnt; in 1661, another schoolmaster here, Andrew Rutherford, was appointed commissioner for trying certain persons accused of witchcraft.

As a boy, Sir Walter Scott resided for some time, in 1777, at Prestonpans, and must have acquired then his minute knowledge of the localities which he afterwards turned to so good account in *Waverley*.

The battle which was fought on 21 Sept. 1745, between the Jacobite forces under Prince Charles Edward and the Hanoverian forces under Sir John Cope, occurred principally within the parish of Tranent, and is sometimes called the battle of Preston, sometimes the battle of Gladsmuir, but oftener the battle of Prestonpans. Sir John Cope landed his troops and stores at Dunbar on the 16th, 17th, and 18th of September; and, desirous of making all speed to engage the rebels, who were then in possession of Edinburgh, he marched from Dunbar on the 19th, and took post in battle order on the 20th in the eastern vicinity of Preston, his right extending towards the sea at Port-Seaton, and his left towards a morass SE of Preston. Scarcely had he made his dispositions when the whole of the Highland army appeared descending the heights in the direction of Tranent. On approaching Tranent, the Highlanders were received by the King's troops with a vehement shout of defiance, which the Highlanders answered in a similar strain. About two o'clock in the afternoon the Highland army halted on an eminence called Birsley-Brae, about ½ mile to the W of Tranent, and formed in order of battle about 1 mile from the royal forces. In the expectation that the Highlanders were advancing by the usual route through Musselburgh and Preston, Cope had taken up the position we have described, with his front to the W; but as soon as he observed the Highlanders on the heights upon his left, he changed his front to the S. This change of position, while it secured Cope better from attack, in the case of defeat was not so well calculated for safety as the first position. On his right was the E wall of a park belonging to Erskine of Grange, which extended a considerable way from N to S, and still farther to the right was the village of Preston. The village of Seaton was on his left, and the village of Cockenzie and the sea in his rear. Almost immediately in front was a deep ditch filled with water, and a strong thick hedge. Farther removed from the front, and between the two armies, was a morass, the ends of which had been drained, and were intersected by numerous cuts; and on the more firm ground at the ends were several small enclosures, with hedges, dry stone-walls, and willow trees. As the Highlanders were in excellent spirits, and eager to close immediately with the enemy, Charles felt very desirous to comply with their wishes; but he soon ascertained that the passage across the morass would be extremely dangerous, if not altogether impracticable.

While his lieutenant-general was, in consequence of this information, planning a different mode of attack, the Prince himself was moving with a great part of his army further off towards Dolphingston on Cope's right. Halting and turning towards Preston Tower, he seemed to threaten that flank of the English general, who, thereupon, returned to his original position with his front to Preston, and his right towards the sea. Lord George Murray, considering that the only practicable mode of attacking Cope was by advancing from the E, now led off part of the army through the village of Tranent, and sent notice to the Prince to follow him with the remainder as quickly as possible. After the Highland army had halted on the fields to the E of Tranent, a council of war was held, at which it was resolved to attack the enemy at break of day. A few piquets were placed around the bivouac, and the Highlanders, having wrapped themselves up in their plaids, lay down on the ground to repose for the night. When Cope observed Charles returning towards Tranent, he resumed his former position with his front to the S; and thus, in a few hours, he was obliged, by the unrestrained evolutions of the Highlanders, to shift his ground no fewer than four times. He now began to perceive that his situation was not so favourable as he had imagined, and that while the insurgents could move about at discretion, select their ground, and choose their time and mode of attack, he was cramped in his own movements and could act only on the defensive. To secure his army from surprise during the night, he placed advanced piquets of horse and foot along the side of the morass, extending nearly as far E as the village of Seaton. He, at the same time, sent his baggage and military chest down to Cockenzie; and as the night—that of Friday the 20th of September—was very cold, he ordered fires to be kindled along the front of his line, to keep his men warm.

In point of numbers, the army of Cope was rather inferior to that of Charles; but many of the Highlanders were badly armed, and some had no arms at all. The royal forces amounted altogether to about 2300 men; but the number in the field was diminished to 2100 by the despatch of the baggage-guard to Cockenzie. The order of battle finally formed by Cope along the N side of the morass was as follows: He drew up his foot in one line, in the centre of which were eight companies of Lascelles' regiment, and two of Guise's. On the right were five companies of Lee's regiment, and on the left the regiment of Murray, with a number of recruits for different regiments at home and abroad. Two squadrons of Gardiner's dragoons formed the right wing, and a similar number of Hamilton's composed the left. The remaining squadron of each regiment was placed in the rear of its companions as a reserve. On the left of the army, near the waggon-road from Tranent to Cockenzie, were placed the artillery, consisting of six or seven pieces of cannon and four cohorns under the orders of Lieut.-Colonel Whiteford, and guarded by a company of Lee's regiment, commanded by Captain Cochrane. Besides the regular troops there were some volunteers, consisting principally of small parties of the neighbouring tenantry, headed by their respective landlords.

The Highland army commenced its movement in the morning of the 21st, early enough to allow the whole of it to pass the eastern outlet from the morass before the dawn. It was divided into two successive columns, with an interval between. The Duke of Perth led the first column; and two persons intimately acquainted with the morass went before him to show the way. A little in advance of the van, too, was a select party of 60 men doubly armed, under the command of Macdonald of Glenalladale, major of the regiment of Clanranald, whose appointed duty it was to seize the enemy's baggage. The army proceeded in an easterly direction till near the farm of Ringan-head; and then, turning to the left, they

marched in a northerly direction through a small valley which intersects the farm. During the march the strictest silence was kept, not even a whisper was heard; and lest the trampling of horses might discover their advance, the few that were in the army were left behind. The ford or path across the morass was so narrow that the column—which marched three men abreast—had scarcely sufficient standing room; and the ground along it was so soft that many of the men at almost every step were up to the knees in mud. The path in question—which was about 200 paces to the W of the stone bridge afterwards built across Seaton mill-dam—led to a small wooden bridge thrown over the large ditch which ran through the morass from W to E. This bridge, and the continuation of the path on the N of it, were a little to the E of Cope's left. From ignorance of the existence of this bridge—from oversight, or from a supposition that the marsh was not passable in that quarter—Cope had placed no guards in that direction; so that the Highland army, whose march across could here have been effectually stopped by a handful of men, passed the bridge and cleared the marsh without interruption.

Hitherto the darkness had concealed the march of the Highlanders; but the morning was now about to dawn, and at the time the order to halt was given, some of Cope's piquets, stationed on his left, for the first time heard the tramp of the Highlanders. The Highlanders plainly heard these advanced guards challenge them, 'Who is there?' No answer having been returned, the piquets gave the alarm, and the cry of 'Cannons, cannons! Get ready the cannons, cannoniers!' resounded through Cope's left wing. Charles instantly gave directions for attacking Cope before he should have time to change his position by opposing his front to that of the Highland army. As arranged at the council of war on the preceding evening, the army was drawn up in two lines. The first comprised a right wing, commanded by the Duke of Perth, and consisting of the regiments of Clanranald, Keppoch, Glengarry, and Glencoe, under their respective chiefs, and a left wing commanded by Lord George Murray, and consisting of the Camerons of Lochiel under their own chief, and the Stewarts of Appin under Stewart of Ardshiel. The second line, which was to serve as a reserve, consisted of the Athole men, the Robertsons of Strowan, and the Maclauchlans. This body was under the command of Lord Nairne. As soon as Cope received intelligence of the advance of the Highlanders, he gave orders to change his front to the E. Some confusion took place in carrying these orders into execution, from the advanced guards not being able to find out their regiments, and so stationing themselves on the right of Lee's five companies, as to prevent the two squadrons of Gardiner's dragoons, which had been posted on the right of the line, from forming properly. For want of room, the squadron under Colonel Gardiner drew up behind that commanded by Lieut.-Colonel Whitney. In all other respects the disposition of each regiment was the same; but the artillery, which before the change had been on the left, and close to that wing, was now on the right somewhat farther from the line, and in front of Whitney's squadron.

There was now nothing to prevent the armies from coming into collision; and if Cope had had the choice, he could not have selected ground more favourable for the operations of cavalry than that which lay between the two armies. It was a level cultivated field of considerable extent, without bush or tree, and had just been cleared of its crop of grain. But the celerity with which the Highlanders commenced the attack prevented Cope from availing himself of this local advantage. The beams of the rising sun were just beginning to illuminate the horizon; but the mist which still hovered over the cornfields prevented the two armies from seeing each other. As the Highlanders had advanced considerably beyond the main ditch, Lord George Murray was apprehensive that Cope might turn the left flank; and to guard against such a contingency, he desired Lochiel, who was on the extreme left, to order his men in advancing to incline to the left. Lord George then ordered the left wing to advance, and sent an aide-de-camp to the Duke of Perth to request him to put the right in motion. The Highlanders moved with such rapidity that their ranks broke; to recover which, they halted once or twice before closing with the enemy. When Cope, at day-break, observed the first line of the Highland army formed in order of battle, at the distance of 200 paces from his position, he mistook it for bushes; but before it had advanced half-way, the rays of the rising sun bursting through the retiring mist showed the armies to each other.

As the right wing of the Highlanders marched straight forward without attending to the oblique movement of the Camerons to the left, a gap took place in the centre of the line. An attempt was made to fill it up with a second line, which was about fifty paces behind the first; but before this could be accomplished, the left wing, being the first to move, had advanced beyond the right of the line, and was now engaged with the enemy. By inclining to the left, the Camerons gained half the ground originally between them and the main ditch; but this movement brought them up directly opposite to Cope's cannon. On approaching the cannon the Highlanders fired a few shots at the artillery guard, which alarmed the gunners to such a degree that they fled, carrying the powder flasks along with them. To check the advance of the Highlanders, Colonel Whiteford fired off five of the field-pieces with his own hand; but though their left seemed to recoil, they instantly resumed the rapid pace they had set out with. The artillery guard next fired a volley with as little effect. Observing the squadron of dragoons under Whitney advancing to the charge, the Camerons set up a loud shout, rushed past the cannon, and, after firing a few shots at the dragoons, which killed several men, and wounded the lieutenant-colonel, flew on them sword in hand. When assailed, the squadron was reeling to and fro from the fire; and the Highlanders following an order they had received, to strike at the noses of the horses without minding the riders, completed the disorder. In a moment the dragoons wheeled about, rode over the artillery guard, and fled followed by the guard. The Highlanders continuing to push forward without stopping to take prisoners, Colonel Gardiner was ordered to advance with his squadron, and charge the enemy. He accordingly went forward, encouraging his men to stand firm; but this squadron, before it had advanced many paces, experienced a similar reception, and followed the example which the other had just set. After the flight of the dragoons, the Highlanders advanced upon the infantry, who opened a fire from right to left, which went down the line as far as Murray's regiment. They received this volley with a loud huzza, and throwing away their muskets, drew their claymores and rushed upon the foot before they had time to reload their pieces. Confounded by the flight of the dragoons, and the furious onset of the Highlanders, the astonished infantry threw down their arms and took to their heels. Hamilton's dragoons, who were stationed on Cope's left, displayed even greater pusillanimity than their companions; for no sooner did they observe the squadrons on the right give way, than they turned their backs and fled without firing a single shot or drawing a sword. Murray's regiment being thus left alone on the field, fired upon the Macdonalds who were advancing, and also fled. Thus, within a very few minutes after the action had commenced, the whole army of Cope was put to flight. With the exception of their fire, not the slightest resistance was made by horse or foot, and not a single bayonet was stained with blood. Such were the impetuosity and rapidity with which the first line of the Highlanders broke through Cope's ranks, that they left numbers of his men in their rear, who attempted to rally behind them, but, seeing the second line coming up, endeavoured to make their escape. Though the second line was not more than 50 paces behind the first, and was always running as fast as it

could to overtake the first line, and near enough never to lose sight of it, yet such was the rapidity with which the battle was gained, that, according to the Chevalier Johnstone, who stood by the side of the Prince in the second line, he could see no other enemy on the field of battle than those who were lying on the ground killed and wounded.

Unfortunately for the royal infantry, the walls of Lord Grange's park enclosures about the village of Preston, which, from the position taken up on the preceding evening, formed their great security on their right, now that these park walls were in their rear, operated as a barrier to their flight. Having disencumbered themselves of their arms to facilitate their escape, they had deprived themselves of their only means of defence; and, driven as they were upon the walls of the enclosures, they would have all perished under the swords of the Highlanders, had not Charles and his officers strenuously exerted themselves to preserve the lives of their discomfited foes. The impetuosity of the attack, however, and the sudden flight of the royal army, allowed little leisure for the exercise of humanity; and before the carnage ceased several hundreds had fallen under the claymores of the Highlanders, and the ruthless scythes of the Macgregors. Armed with these deadly weapons, which were sharpened and fixed to poles from 7 to 8 feet long, to supply the place of other arms, this party mowed down the affrighted enemy, cut off the legs of the horses, and severed, it is said, the bodies of their riders in twain. Of the infantry of the royal army, only about 170 escaped. From a report made by their own sergeants and corporals, by order of Lord George Murray, between 1600 and 1700 prisoners, foot and cavalry, fell into the hands of the Highlanders, including about 70 officers. In this number were comprehended the baggage guard stationed at Cockenzie, amounting to 300 men, who, on learning the fate of the main body and the loss of their cannon, surrendered to the Camerons. The cannon and all the baggage of the royal army, together with the military chest, containing £4000, fell into the hands of the victors. The greater part of the dragoons escaped by the two roads at the extremities of the park wall, one of which passed by Colonel Gardiner's house in the rear of their right, and the other on their left, to the N of Preston House. In retiring towards these outlets, the dragoons, at the entreaties of their officers, halted once or twice, and faced about to meet the enemy; but as soon as the Highlanders came up and fired at them, they wheeled about and fled. Cope, who was by no means deficient in personal courage, assisted by the Earls of Home and Loudon, collected about 450 of the panic-struck dragoons on the W side of the village of Preston, and attempted to lead them back to the charge; but no entreaties could induce these cowards to advance, and the whistling of a few bullets, discharged by some Highlanders near the village, so alarmed them that they instantly scampered off in a southerly direction, screening their heads behind their horses' necks to avoid the bullets of the Highlanders. The general had no alternative but to gallop off with his men. He that night reached Coldstream, a town about 40 miles from the field of battle, and entered Berwick next day.

Among six of Cope's officers who were killed was Colonel James Gardiner (1688-1745), a veteran soldier who served under the Duke of Marlborough, and whose character combined a strong religious feeling with the most undaunted courage. He had been decidedly opposed to the defensive system of Cope on the preceding evening, and had counselled the general not to lose a moment in attacking the Highlanders; but his advice was disregarded. Anticipating the fate which awaited him, he spent the greater part of the night in devotion, and resolved at all hazards to perform his duty. He was wounded at the first onset at the head of his dragoons; but disdaining to follow them in their retreat, he joined a small body of foot, which attempted to rally not far from the wall of his own garden, and while fighting at their head was cut down by the murderous Lochaber axe of a Macgregor. He was carried to the manse of Tranent in almost a lifeless state, where he expired within a few hours, and was interred in the NW corner of the church of Tranent. Captain Brymer, of Lee's regiment, who appears to have participated in Gardiner's opinion as to attacking the Highlanders, met a similar fate, as did also Captain Stewart of Physgill, over whose grave in Prestonpans kirkyard there is still visible, though partially weather-worn, an interesting memorial tablet. The loss on the side of the Highlanders was trifling. Four officers, and between 30 and 40 privates, were killed; and 5 or 6 officers, and between 70 and 80 privates, wounded. After the termination of the fight, the field of battle presented an appalling spectacle, rarely exhibited in the most bloody conflicts. As almost all the slain were cut down by the broadsword and the scythe, the ground was strewed with legs, arms, hands, noses, and mutilated bodies, while, from the deep gashes inflicted by these dreadful weapons, the ground was literally soaked with gore. See, besides works cited under CULLODEN, Mr P. M'Neill's *Tranent and its Surroundings* (2d ed., Edinb. 1884) and the Autobiography of Alexander Carlyle, D.D. (1722-1805), who was a son of the minister of Prestonpans, beheld the Jacobite victory from the top of the church steeple, and himself for 57 years was minister of INVERESK.

The small but populous parish of Prestonpans, containing also the villages of PRESTON and DOLPHINGSTON, is bounded E and SE by Tranent, SW by Tranent and by Inveresk in Edinburghshire, NW by the Firth of Forth. Its utmost length, from NE to SW, is 2§ miles; its breadth varies between 3 furlongs and 1¼ mile; and its area is 1429⅛ acres, of which 135¼ are foreshore. The surface rises gently from the shore, attaining 100 feet above sea-level at the railway station, and 200 at the Tranent border. The beach is low and sandy, with a bulwark of low reefs, much shattered and water-worn along its margin; and it commands a picturesque prospect of the Firth of Forth and the southern parts of Fife. Ravenshaugh Burn runs along the boundary with Edinburghshire. The rocks belong mainly to the Carboniferous Limestone series; and coal was wrought in this parish as early perhaps as in any district in Scotland, and continues still to be largely worked, the recent growth of the population being due to an increase in mining activity. Ironstone and fireclay also occur, and are turned to profitable account in connection with the mining operations. The prevailing soil is loam, partly heavy on a clay bottom, partly light on a sandy or gravelly bottom. Upwards of 1000 acres are under cultivation. The chief mansions, both noticed separately, are PRESTONGRANGE and DRUMORE; and 4 proprietors hold each an annual value of more than £500, 4 of between £100 and £500. Prestonpans is in the presbytery of Haddington and the synod of Lothian and Tweeddale; the living was, in 1873, estimated to be worth £543. The original name of a hamlet near by was Aldhammer; but this early gave way to Priestistoun or Prieststown, which was gradually abbreviated into Preston; and that (which was the name under which the district was erected into a parish by act of parliament in 1606) was, in its turn, superseded by successively Salt-Preston and Prestonpans. An ancient chapel, which was situated at Preston, and which was a vicarage of the monks of Holyrood, in 1544 was burned, in common with the town and castle of Preston, by the Earl of Hertford, and never afterwards repaired. Another ancient chapel, situated within what is now the West Kirkyard, towards the W end of the town of Prestonpans, was in pre-Reformation times supplied by the monks of Newbattle, who were then the owners of most of the property in that quarter, but, excepting old stones built into the walls, no trace of it remains. The inhabitants of the two baronies, the eastern and western, or Preston and Prestongrange, into which the parish was distributed, seem, for a time after the monastic services were discontinued, to have tacitly attached themselves to Tranent; but were quite unduly provided for, and could obtain but limited access to the interior of the church. Mr John Davidson (1550-1604),

who was minister for the last eight years of his life, at length built, largely at his own expense, a church and a manse in the village of Prestonpans, to which a glebe, garden, and stipend were attached by George Hamilton of Preston; and he also founded here a school for the teaching of the Latin, Greek, and Hebrew languages, and endowed it with all his property, free, movable, and heritable. The grammarian, Alexander Hume, was its first master from 1606 till 1616. In 1595 the General Assembly declared Prestonpans to be a parish *quoad sacra*, and in 1606 the parliament of Perth 'erected the said newly-built kirk into a parish kirk, which was to be called the parish kirk of Preston.' The public school, erected under the Education Act of 1873, with accommodation for 400 children, had (1884) an average attendance of 341, and a grant of £298, 7s. 6d. Valuation (1860) £8194, (1885) £11,798, 14s. Pop. (1801) 1964, (1831) 2322, (1861) 2080, (1871) 2069, (1881) 2573.—*Ord. Sur.*, shs. 33, 32, 1863-57.

Preston Tower. See PRESTON, Prestonpans.

Prestwick, a small town in Monkton and Prestwick parish, Kyle district, Ayrshire, within 3 furlongs of the sea-shore, and 2¾ miles N by E of Ayr. Its age, and especially its constitution as a burgh of barony, are remarkable, and strongly resemble those of the curious neighbouring burgh of Newton-upon-Ayr. A charter, confirming and renewing its privileges, was granted by James VI. as administrator-in-law for his eldest son, then a minor, Henry, Duke of Rothesay, Earl of Kyle, Carrick, and Cunninghame, Lord of the Isles, and Prince Stewart of Scotland. The charter is dated 19 June 1600, and expressly says that Prestwick was known to have been a free burgh of barony beyond the memory of man, for the space of 617 years before the date of renewal. The burgh has power to elect every two years a provost, 2 bailies, and councillors, to grant franchises for several trades, and to hold a market weekly, and a fair on the feast of St Nicholas, 6 December. The freemen, or barons as they are called, are 36 in number. The burgh lands belonging to them as an incorporation extend in a broad strip along the Pow Burn to a line 1½ mile nearer Ayr, and comprehend about 800 acres. The lands used to be distributed in lots among the freemen, and did not remain in perpetuity, but were drawn for every 19 years. Part of them long existed as a common, on which each of the freemen had a right of pasturing a certain number of sheep and cattle; but this, many years ago, was divided and appropriated in the same way as the rest of the barony. Freemen could not sell their lots or shares, or the baronial rights which belong to them, without the consent of the corporation; and females succeeded equally with males to the inheritance of the freeholds. A freeman might, for an offence, be sent to prison, but not locked up; and, if he came out without being liberated by the judicial sentence of the magistrates, he forfeited all his corporation privileges and property. In 1850, however, all restrictions were abolished, and the land is now held in the same way as other heritable land in Scotland. Within the last few years Prestwick has become the headquarters of golfing in the West of Scotland, and at the same time a favourite watering-place, so that in summer it is crowded with visitors. It has a post office under Ayr, with money order, savings' bank, and telegraph departments, a station on the Ayr branch (1838-40) of the Glasgow and South-Western railway, an ancient market cross, a town-hall, a cemetery, Free and U.P. churches, and a public school. The town-hall, built about 1837, is a handsome edifice, with a Gothic spire. The Free church, built in 1874 at a cost of £1600, contains 450 sittings. The U.P. church was opened in 1884; and the public school, accommodating 320 children, in 1882. Pop. (1793) 260, (1837) 758, (1861) 851, (1871) 750, (1881) 1064, of whom 596 were females. Houses (1881) 231 inhabited, 99 vacant, 13 building.—*Ord. Sur.*, sh. 14, 1863. See MONKTON, and John Fullarton's *Records of the Burgh of Prestwick from* 1470 *to* 1782 (Glasg., Maitland Club, 1834).

Prestwick Toll or **New Prestwick,** a village in Monkton and Newton-upon-Ayr parishes, Ayrshire, 1 mile S by W of Prestwick. Pop. (1871) 468, (1881) 734, of whom 337 were in Newton-upon-Ayr parish.

Priesthill. See MUIRKIRK.

Primside Mill, a village in Morebattle parish, Roxburghshire, 1 mile SSW of Yetholm.

Prinlaws. See LESLIE.

Prior Bank, a seat in Melrose parish, Roxburghshire, in the immediate vicinity of Melrose town. For the last eighteen years of his life it was the favourite residence of the Edinburgh publisher, William Tait (1792-1864), who welcomed Kossuth here in 1851; and at his death it passed to his brother-in-law, Adam Black (1784-1874), lord provost of Edinburgh 1843-48, and Liberal M.P. for that city 1856-65.—*Ord. Sur.*, sh. 25, 1865.

Priorhill, a village in Canonbie parish, Dumfriesshire, close to Canonbie station.

Prosen Water, a troutful stream of NW Forfarshire, rising at an altitude of 2750 feet on the western slope of Mayar (3043 feet), and running 18 miles south-eastward through the northern section of Kirriemuir parish, and along the borders of Cortachy, Kingoldrum, and Kirriemuir proper, till, after a total descent of nearly 2400 feet, it falls into the South Esk at a point 1¼ mile SE of Cortachy Castle. It receives, in its progress, Farchal, Cramie, Glenlogie, Inchmill, Glenuig, Glencally, and Corogie Burns; traverses, till near its mouth, a deep mountain glen, called from it GLENPROSEN; and on the Shawfield estate threads a narrow wooded gorge, the 'Loup,' where a fugitive of the '45 is said to have leapt the channel from rock to rock.—*Ord. Sur.*, shs. 65, 56, 1870.

Protstownhill, a village in Gamrie parish, Banffshire, 1¾ mile E of Gardenstown.

Provanhall, a village in Shettleston parish, Lanarkshire, 2 miles NNW of Baillieston station.

Pulteneytown. See WICK.

Purves Hall, a mansion in Eccles parish, Berwickshire, 3½ miles E by S of Greenlaw. Its owner, Charles Hyde Home-Purves, Esq. (b. 1850; suc. 1867), is heir to the MARCHMONT estate, and himself holds 750 acres in the shire, valued at £1236 per annum.—*Ord. Sur.*, sh. 25, 1865.

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QUAICH. See QUOICH and GLENQUAICH.

Quair Water, a troutful stream of Traquair parish, Peeblesshire, rising on the E side of Dun Rig at an altitude of 2100 feet, close to the Selkirkshire boundary, and running 6½ miles north-eastward, till, after a descent of 1650 feet, it falls into the Tweed at a point 5 furlongs S of Innerleithen. It is fed by Newhall, Curly, and FINGLAND Burns, each nearly equal to itself in length and volume; and it has been celebrated in several lyrics, of which that by Nicol begins, 'Where Quair rins sweet amang the flowers.'—*Ord. Sur.*, sh. 24, 1864.

Quanterness. See KIRKWALL.

Quarff, an ancient *quoad civilia* parish and a modern *quoad sacra* parish in the S of Shetland. The ancient *quoad civilia* parish, forming a narrow part of the mainland, 6 miles SSW of Lerwick, extends 1¾ mile from sea to sea, between the East and West Voes of Quarff. It chiefly consists of an inhabited valley 1¾ mile long and ½ mile broad, with pastoral hill flanks; and, together with the ancient *quoad civilia* parish of Burra, is united to Bressay. The modern *quoad sacra* parish comprises the ancient parishes of Quarff and Burra; was constituted by the General Assembly in

1833, and reconstituted by the Court of Teinds prior to 1856; and is in the presbytery of Lerwick and synod of Shetland. Its church is a Government one, and contains 360 sittings. Pop. of *q. s.* parish (1871) 952, (1881) 918.

Quarrelton, a collier village in the SW of Abbey parish, Renfrewshire, ½ mile S of Johnstone.

Quarrelwood, a hamlet in Kirkmahoe parish, Dumfriesshire, 3½ miles N by W of Dumfries.

Quarter, a mansion in Largs parish, Ayrshire, near the shore of the Firth of Clyde, 2½ miles NNW of Largs town.

Quarter, an estate, with a mansion, in Dunipace parish, Stirlingshire, 1⅜ mile N by W of Denny.

Quarter, an estate in Broughton parish, Peeblesshire, on Holms Water, 2¼ miles SSW of Broughton station. It was sold in 1741 to Thomas Tweedie, a cadet of the Tweedies of OLIVER. See RACHAN HOUSE.

Quarter Ironworks and Darngaber, a conjoint village in Hamilton parish, Lanarkshire, 3 miles S of Hamilton town and ½ mile ENE of Quarter Road station on the Strathaven branch of the Caledonian railway. It has a post office (Quarter) under Hamilton, an Established chapel of ease, a public school, and iron-works with five blast furnaces. The chapel of ease is an Early Decorated edifice of 1884, containing 430 sittings. Pop. (1871) 544, (1881) 886.—*Ord. Sur.*, sh. 23, 1865.

Quarter, West. See WESTQUARTER.

Queensberry, a mountain (2285 feet) in Closeburn parish, N Dumfriesshire, 1⅜ mile SE of the nearest point of Lanarkshire, 1½ N by E of Wee Queensberry (1675 feet), 7 miles WSW of Moffat, and 7¾—but 12 to walk—ENE of Thornhill. Sending down its eastern base into the parish of Kirkpatrick-Juxta, and lifting its summit but a brief way from the extreme angle of the deep indentation made by Lanarkshire into Dumfriesshire, it forms, with its fine, bold, sombre mass, a striking feature in many rich scenic landscapes. Its suffix is the Anglo-Saxon *berg*, 'a hill,' softened into *berry;* and, situated amid a congeries of noble heights, but queening it over them all like a sovereign among her courtiers, it is truly the 'queen hill' of a rich and superb district. About 1802 Hogg, the Ettrick Shepherd, was tending his master's ewes on the slopes of Queensberry, when he received a visit from James and Allan Cunningham. See DRUMLANRIG.—*Ord. Sur.*, shs. 16, 10, 1864.

Queen's Cairn. See STITCHELL.

Queensferry or **South Queensferry,** a small town and yet smaller parish of Linlithgowshire. The town is a royal and parliamentary burgh, the royal comprising all the parish of Queensferry, and the parliamentary extending into Dalmeny. It stands on the southern shore of the Firth of Forth, here only 1½ mile broad, and has a station on a branch line of the North British, 5⅝ miles N by W of Ratho Junction and 13¾ WNW of Edinburgh, from which by road it is 9 miles distant. Its site is a belt of low ground at a point opposite the peninsula of North Queensferry, and the intermediate island of Inchgarvie, where the firth is suddenly and briefly, but very greatly, contracted in breadth. The ground behind the town rises abruptly; and immediately at the summit, or even on the slope of the steep bank, becomes open agricultural country. The town comes first into notice as the station at which St Margaret, the queen of Malcolm Ceannmor, passed the Forth in her numerous excursions between Edinburgh and Dunfermline during 1068 and 1093; and it received in honour of her, both its present name, and some early Latin designations of similar import, *e.g.*, *Portus Reginæ* (1164) and *Passagium Reginæ* (1182). Malcolm IV., the great-grandson of Margaret, made the monks of Dunfermline a grant of the right of ferry at the place, and of a small piece of ground within the limits of the present royalty,—a grant which probably led almost immediately to the erection of the town; and, in 1164, he granted also to the monks of Scone a free passage here for the abbot, the monks, and their men. In 1294 Pope Gregory confirmed to the abbey of Dunfermline 'dimidium Passagii Sanctæ Margaritæ Reginæ;' and in a charter (1363) of general confirmation of regality jurisdictions by David II. to the monks of Dunfermline, 'Passagium' figures as a burgh of regality along with 'Dunfermlyne, Kirkcaldy, and Muskilburgh.' The place, as a burgh of regality, was again granted to the monks by Robert I., regranted by Robert III., and confirmed in 1450 by James IV. A new charter was granted, in 1636, by Charles I., confirming the preceding royal grants, but at the same time confirming a charter by Robert, commendator of Dunfermline. As this is the latest extant charter, and the record of the Great Seal for the period is defective, no evidence exists as to the precise year when the town was erected into a royal burgh. Yet proof is decisive that the erection took place before 1641, as the Scots Act of 1641 ratifies and approves of the charter of erection into 'ane free Burgh Royall and in ane free Port, Haven, and Harbour, with the haill liberties, privileges, and immunities pertaining to ane free Burgh Royall.' In 1639 a commissioner from it appears for the first time to have sat in parliament; and in the parliament of the following year he recorded a protest that he had produced his commission for Queensferry as a royal burgh, and that 'he had ridden, sitten, and voyced in this parliament as the rest of commissioners of burghs.' He was confronted by a counter-protest on the part of the burgh of Linlithgow, that he 'had neither riddin, sittin, nor voyced in parliament for the Queensferry;' but in 1641, the same Act of Parliament which erected the place into a separate parish, freed it from the galling opposition of Linlithgow, and definitely recognised it as a royal burgh.

Queensferry, in spite of its antiquity and historical importance, has always been small; nor has it ever been enriched by much commerce, or dignified by great events. Its principal street varies in width, but is generally narrow, and wends irregularly to a total length of 650 yards, partly along the shore and partly into the interior. A street of 200 yards goes off from this at right angles, with a terrace along the road leading to Kirkliston. Three short alleys lead down to the harbour, and a fourth leads to the parish school-house. These streets and lanes compose the whole town. Only a square tower, with E and S wings, remains of a Carmelite friary, dedicated to the Virgin Mary, and built and endowed by Sir George Dundas of Dundas as early as 1332. In 1884 the present Mr Dundas of Inchgarvie announced his intention of converting this fragment into a public reading-room. The plain parish church, built in 1633 and refitted in 1821, contains 400 sittings, and has an excellent bell, bearing date 1635. Queensferry besides has a U.P. church, a post office, with money order, savings' bank, and telegraph departments, a branch of the Clydesdale Bank, a water supply (1819), gasworks, a town-hall, a pleasure fair on the second Friday of August, and four hotels, of which that at Newhalls is the 'Hawes Inn' of Scott's *Antiquary*. The harbour and ferry works of North and South Queensferry, Newhalls, and Port-Edgar were greatly improved in 1809-18, from designs by Rennie, at a cost of £33,825; and in 1877-78 the North British Railway Co. expended a further sum of £30,000 on the construction of a timber landing jetty, 900 feet long, a whinstone breakwater, 1300 feet long, a new railway station, etc. A ferry steamboat, the 'Queen Margaret,' was placed on the passage in 1821; but the opening of the Granton and Burntisland ferry has greatly diminished the number of passengers, who in 1811 numbered 228 to 447 a day. It remains to be seen what will be the effects of the completion, about 1888, of the great Forth Bridge (see FORTH and NORTH BRITISH RAILWAY), whose construction in the summer of 1884 was employing 1200 men, of whom 1000 were resident either in South or in North Queensferry; but there can be little or no doubt that its completion will be highly beneficial to the place. In the 17th century, about 20 vessels, most of them large brigs, belonged to Queensferry, and some trade in ship-building was carried on. But now no vessel be-

longs to the port, nor are any built at it; and the commerce of the place consists principally of a coasting trade in coals, manures, and barley inward, and in stones and potatoes outward. Herring fishing is a chief employment during the winter months; and there are connected with it a dozen boats belonging to the town. George IV. embarked at Port-Edgar, 15 Aug. 1822, on his return to England; on 5 Sept. 1842, the Queen and Prince Albert drove from Dalkeith to South Queensferry, embarked on the 'William Adam,' and, after a short cruise up the Forth, landed at North Queensferry, whence they drove on to Scone; on 23 Aug. 1884 the Prince and Princess of Wales, after visiting the Forth Bridge Works, drove through the town on their way from Dalmeny to Hopetoun; and shortly afterwards the Forth Bridge Works were visited by Mr Gladstone and Sir Stafford Northcote. The parish, formed out of Dalmeny in 1636, is in the presbytery of Linlithgow and the synod of Lothian and Tweeddale; the living is worth £355. The town is governed by a provost (which office has been held by the Earls of Hopetoun and Rosebery), 2 bailies, and 6 councillors, and they, in 1882, adopted in part the General Police Act. The magistrates have jurisdiction not only within the royalty but also in the parliamentary bounds, which include the Forth Bridge; and in olden times they were in the habit of exercising jurisdiction much beyond this. Queensferry unites with Stirling, Inverkeithing, Dunfermline, and Culross in sending a member to parliament. The burgh became bankrupt in 1881, but obtained its discharge on a composition of 12s. 6d. per £ in 1882, and in 1883 and 1884 it had a corporation revenue of £120, exclusive of assessments. The municipal and the parliamentary constituency numbered 243 and 204 in 1885, when the annual value of real property within the parliamentary burgh amounted to £6978, 5s. (£3127 in 1875). Pop. (1841) 1233, (1851) 1195, (1861) 1230, (1871) 1521, (1881) 1966, of whom 1136 were males, 290 belonged to the 'Royal Warden' training ship, and 1676 were in the parliamentary burgh, 1064 in the royal burgh or parish of Queensferry.—*Ord. Sur.*, sh. 32, 1857. See W. W. Fyfe's *Summer Life on Land and Water at South Queensferry* (Edinb. 1851).

Seal of Queensferry.

Queensferry, North, a village of Fife in the detached section of the civil parish of Dunfermline, but (since 1855) in the ecclesiastical parish of Inverkeithing, at the extremity of Ferryhill peninsula, on the N coast of the Firth of Forth, directly opposite Queensferry, and 1¾ mile S of Inverkeithing. William, Bishop of St Andrews, in 1323 gave its chapel of St James to the abbey of Dunfermline; in 1781, after the visit of Paul Jones to the firth, it acquired a battery, long ago dismantled. A favourite summer resort for sea-bathing, it has a post office, with money order, savings' bank, and telegraph departments, a railway station, a coast-guard station, a Free church, and a public school. Pop. (1831) 434, (1861) 369, (1871) 382, (1881) 360.—*Ord. Sur.*, sh. 32, 1857.

Queensferry, South. See Queensferry.

Queenshill, a mansion in Tongland parish, Kirkcudbrightshire, 2 miles N of Tarff station. It was the residence and death-place of James Beaumont Neilson, C.B. (1792-1863), inventor of the famous hot-blast, to whose memory a pyramid, 35 feet high, was erected in 1883. His son, Walter Montgomerie Neilson, Esq. (b. 1819), holds 1822 acres in the shire, valued at £1559 per annum.—*Ord. Sur.*, sh. 5, 1857.

Queich. See Glenquaich.

Queich, North, a rivulet of Kinross-shire, rising among the Ochil Hills, adjacent to the boundary with Perthshire, and running 6½ miles east-by-southward, chiefly within Orwell parish, but for 2 miles along or close to the boundary with Kinross, till it falls into the NW corner of Loch Leven, 1 mile SE of Milnathort.—*Ord. Sur.*, sh. 40, 1867.

Queich, South, a rivulet, party of Perthshire, but chiefly of Kinross-shire. It rises among the Ochils, within the Perthshire border, 1½ mile WNW of the source of the North Queich; begins, a little below its source, to trace for nearly 4 miles the boundary between the two counties; then runs 4½ miles east-by-southward through Kinross parish; and falls into Loch Leven at the S end of Kinross town.—*Ord. Sur.*, sh. 40, 1867.

Quendale Bay, a bay towards the southern extremity of Dunrossness parish, Shetland. Opening from the SW, it is flanked by Fitful Head and Scatness (the latter 1¼ mile W by N of Sumburgh Head); and it measures 3⅜ miles across the entrance, and 2⅛ miles thence to its inmost recess. It is esteemed a good natural harbour. Quendale House, at its head, 23 miles SSW of Lerwick, is the seat of Andrew John Grierson, Esq. (b. 1832; suc. 1863), who holds 22,006 acres, valued at £1132 per annum.

Quinag. See Assynt.

Quiraing, a mountain (1779 feet) in Kilmuir parish, Isle of Skye, Inverness-shire, 2 miles WNW of Stenscholl, 6 NE of Uig, and 20 N by W of Portree. Consisting of amygdaloidal trap, and apparently formed by volcanic eruption, it ascends very steeply, almost murally on the NE side; and is capped with a kind of crater, from which it takes its name (Gael. *cuith-fhir-Fhinn*, 'pit of the men of Fingal'). The rim around the summit resembles a strong, rough, lofty rampart, with only three or four gaps or fissures affording access to the interior. The principal gap is a steep narrow passage, obstructed by *débris*, and overhung by a tall, tapering, isolated pinnacle, the 'Needle;' and the rampart all round, except at the gaps, shows distinct basaltic formation in columnar, pyramidal, and other forms. Through the gaps one gains picturesque glimpses of sea and land; and the hollow itself could shield 4000 head of black cattle, and indeed was probably used in olden times as a place of retreat and concealment from invasion. From the bottom of it rises an oblong tabular mass or truncated rocky hill, the flat and turf-covered 'Table,' which measures 300 feet long and 180 broad. Such is this 'nightmare of nature,' this huge 'basaltic cathedral,' which in 1872 was ascended on foot by the Empress Eugenie and the Prince Imperial. See chaps. vii. and xi. of Alex. Smith's *Summer in Skye* (1865).

Quivox, St. See St Quivox.

Quoich Water, a stream of Crathie and Braemar parish, Aberdeenshire, formed by two head-streams on the eastern side of Benabourd at an altitude of 2273 feet, and winding 8½ miles south-by-eastward, till it falls into the Dee at a point 1¾ mile WSW of Castleton. It forms, 1 mile above its mouth, a beautiful waterfall, the Linn of Quoich, its steep ravine being fringed with birch and pine.—*Ord. Sur.*, sh. 65, 1870.

Quothquan. See Libberton.

R

RAASAY (Scand. *Raa*, 'a roe deer,' and *ey*, 'an island'), an island in Portree parish, Inverness-shire, and lying between the centre of the E coast of Skye and the Applecross district of Ross-shire. From the former it is separated by the Sound of Raasay, 5¼ miles wide at the N end of the island, 2½ at the centre, and 1 mile opposite Raasay House, at the Narrows of Raasay. From Applecross it is separated by the Inner Sound, 5¼ miles wide at the N end, 8⅝ opposite Applecross Bay, and 6⅝ at the S end. At the N end is the small Eilean Tigh, which is practically part of Raasay, and this is separated from South Rona by Kyle Rona, ½ mile wide. One and one-eighth mile SSW of Eilean Tigh is Eilean Fladday, from which Raasay is separated by Kyle Fladda, which is dry from half-tide to half-tide. On the S the island is separated from the peninsula of Skye which stands out between Loch Sligachan and Loch Ainort, by a strait 1 mile wide, and from Scalpay on the SE by Kyle More, ⅜ mile wide. Raasay Sound has a depth varying from 78 to 87 fathoms, and the Inner Sound is 77 fathoms at the S end, 130 off Brochel Bay, and 138 (the greatest depth) opposite the S end of Rona. The deepest parts are in the centre, where they form depressions considerably below the bottom of the sea in the neighbourhood of Skye. These depressions unite at the N end of Rona, and form a basin running northward into the Minch to nearly a line drawn from the mouth of Loch Ewe to Stornoway, but gradually widening and becoming more shallow as it passes N. The whole basin may be taken as bounded by the 50-fathom line, and Professor James Geikie attributes its formation to the action of ice. The tidal current in the Sound, particularly in the narrow part S of Portree Bay, is very strong. At the SE end of Kyle Rona is the island of Garbh Eilean and the smaller Eilean-an-Fhraoich. Between Eilean Tigh and Eilean Fladday is Loch a Sguirr, 1¼ mile wide between the islands, and a mile deep. To the S of Eilean Fladday is the long point of Ard-an-Torrain, immediately to the S of which is Loch Arnish, 1 mile wide across the mouth, and 1 mile deep. The point to the S of this is Manish Point, and close to it is Manish Island. Five miles farther S is Holoman Island, with Holoman Bay beyond and Oskaig Point at the S side. Half-a-mile NNW of this point are the rocks known as Sgeir Chnapach, and 1 mile SW in the middle of the channel is M'Millan's Rock. On the NE side of the Narrows of Raasay is Churchton Bay, which is the last indentation on the W side of the island. The E side is but little indented, but near the centre is the sweep sometimes known as Brochel Bay. The total length of the island, inclusive of Eilean Tigh, is 13 miles, and the width 1¼ mile opposite the middle of Kyle Fladda, 2¼ miles in centre, and 3½ miles at the widest part at Raasay House. The total area, inclusive of the foreshore, is 15,704·384 acres. From the N end down to opposite Loch Arnish, the rocks are Laurentian, and from that to the centre of the island, they are Cambrian. To the S of this the deposits are estuarine beds of oolitic age, overlaid uncomformably by a thick series of volcanic rocks belonging to the Tertiary period. The oolitic beds are exposed all across the island near the centre, and also down the eastern coast from this to the extreme S end of the island. The surface is irregular, but may be described generally as one long ridge broken by transverse hollows with a long slope towards the low shores on the W, and a steep slope bounded by a long range of cliffs on the E. Speaking of the latter, Dr Macculloch says that 'On this side, scenes of considerable grandeur occur, generally marked by great breadth and simplicity of manner, and by powerful effect; at times, however, verging to an artificial character, in the architectural regularity of the flat sandstone cliffs, which are frequently split into columnar and conical forms, rising like towers above the deep, dark sea that washes their bases. The houses perched on these summits seem more like the retreats of the birds that hover round them than the habitations of human beings; the eye from below scarcely distinguishing them, far less their inhabitants. The grandeur of these long-extended walls of rocks is often varied by the enormous fractures and dislocations which have at different times taken place; masses of immense bulk having been occasionally separated so as to form a second ridge below them; while, in other places, huge piles of ruin cover their slopes with fragments advancing far into the sea, and strewing the shore with rocks.' More than a third of the whole island is over 500 feet above sea-level, the highest points being Beinn na h-Iolaire (826) in the part N of Loch Arnish, Beinn a Chapuill (1211) S of Brochel Castle, and the flat-topped Dun Caan (1456)—on the summit of which Boswell danced merrily—the highest point of the island. From the last there is a very fine and extensive view of the Hebrides, the western coast of Ross, and the north-western portions of Inverness-shire. The greater part of the surface of Raasay is barren and heathy, but on the strip of secondary rocks on the E side along the top of the cliffs the soil can be tilled to advantage, as well as in the flat portion about the mansion-house at the extreme SW of the island. There is but little wood, a considerable amount of natural wood and coppice that once existed having been almost entirely cut down for fuel in the wet seasons of 1836 and 1837, when the peats were too wet to burn. Except the cliffs on the E, the wooded part about the mansion-house and the shores of Loch Arnish, with their birch coppice and bold cliffs, there is but little of what may be called scenery in the island. The drainage is effected by a large number of small streams flowing mostly to the Sound of Raasay. Of these the largest from N to S are Manishmore Burn, Glam Burn, Storab Burn, and Inverarish Burn, the latter entering the sea near the mansion-house. In a hut in the glen of the Glam, Prince Charles Edward found a brief refuge after leaving Flora Macdonald. Storab Burn rises from Loch-na-Meilich high up Dun Caan, and the Inverarish from Loch-na-Mna a little to the SSE. Of the latter Boswell tells a curious legend. Raasay and the adjacent islands belonged for about 500 years to the Macleods of Raasay, cadets of the Macleods of Lewis, often known as M'Gilliecallum of Raasay, and it was by one of this family that Dr Johnson and Boswell were so hospitably entertained in 1773. Raasay was, however, among the many proprietors ruined in the destitution crisis of 1846, and the estate passed into the hands of Mr Rainy, who cleared a considerable portion of the crofter population in order to lay out sheep farms. His son, who succeeded, made an early and interesting experiment on the crofter question. He established himself as a resident proprietor, interested himself in the welfare of the people—who then included 104 crofters, with an average rent of less than £5, and 65 cottars—and provided work for them in fencing, draining, trenching, etc., and at the end of four years found he had been spending over £400 a year more than his rental, while the condition of the people was in no way improved. On his death the estate was sold in 1872 to Mr G. G. M'Kay. The mania for highland sport having sprung up, it was resold, in 1874, to a Mr Armitage for about £60,000, to be partially converted into a deer forest; and again, in 1876, to the present proprietor, Mr E. H. Wood, who keeps more than half the island in his own hands for sporting purposes, the rest being in the hands of crofters, lotters, and cottars. The present proprietor has made a large number of improvements since the property passed into his possession, and the only complaints his tenants had to make before the recent Crofters' Commission was about damage done by game, and bad land—the latter a grievance which, unfortunately, no Act of Parliament can remedy. The mansion-house is pleasantly situated near the shore

of Church Bay on the SW; and here is also the Free church of the island, the clachan, and the post office, which is under Portree. The railway steamer calls here on the voyage between Strome Ferry and Portree, both going and coming. The distance from the former place is, in a straight line, 19½ miles, and by the steamer route about 25. The interesting ruin of Brochel Castle on the E coast is separately noticed. Pop. (1841) 647, (1861) 388, (1871) 389, (1881) 478, of whom 241 were males and 237 females.—*Ord. Sur.*, shs. 81, 71, 1882-85.

Rabbit Islands, three islets of Tongue parish, Sutherland, in the mouth of Tongue Bay. The two largest rise to a height of 100 feet, and all three have a sandy soil covered with verdure. They take their name from being occupied by swarms of rabbits, but they were anciently designated Eilean-na-Gaeil, signifying the island of strangers; and they are said to have got that name from having been a landing place of the Danes. They enclose good anchorage for ships of any burden.—*Ord. Sur.*, sh. 114, 1880.

Rachan House, a mansion in BROUGHTON parish, Peeblesshire, near the left bank of Holms Water, 9 furlongs SSE of Broughton station, and 6½ miles ESE of Biggar, under which there is a post office of Rachan Mill. A modern two-story building in the style of an Italian villa, it has beautiful well-wooded grounds. Its owner, James Tweedie, Esq. of QUARTER and Rachan (b. 1831; suc. 1855), holds 11,151 acres in the shire, valued at £4059 per annum. During 1838-60 he and his father spent £80,000 on the purchase of Rachan and other properties; and Rachan, from at least 1406 till 1752, belonged to the Geddeses, of whom James Geddes (1710-48) was author of *An Essay on the Composition of the Ancients.*—*Ord. Sur.*, sh. 24, 1864.

Racks, a village in Torthorwald parish, Dumfriesshire, near the left bank of Lochar Water, with a station on the Glasgow and South-Western railway, 3¾ miles ESE of Dumfries.

Rackwick, Bow of. See NOOP.

Raddery House, a mansion in Rosemarkie parish, Ross-shire, 4 miles NNW of Fortrose.

Radernie. See CAMERON.

Raeberry, a stronghold of the Maclellans on the coast of Kirkcudbright parish, Kirkcudbrightshire, 6¼ miles SSE of the town. It stood on the crest of a terrific precipice overhanging the Solway Firth; was defended, on the landward side, by a strong wall and a deep fosse, the latter spanned by a huge drawbridge; suffered demolition of its main buildings about the middle of the 16th, of its defensive wall and drawbridge about the middle of the 18th, century; and is now represented by only the site and the fosse. It was hence that Sir Patrick Maclellan was carried prisoner to THREAVE.—*Ord. Sur.*, sh. 5, 1857.

Raehills, a mansion in Johnstone parish, Dumfriesshire, near the right bank of Kinnel Water, 10 miles NNW of Lockerbie. A noble castellated edifice in the Tudor style, with very beautiful grounds, it was built in 1786 by James, third Earl of Hopetoun, and received a large edition in 1834. The Earl of Hopetoun in 1792 inherited the estates of his grand-uncle, George, third Marquess of Annandale; and Anne, his daughter, and the heiress to those estates, married her kinsman, Admiral Sir William Johnstone-Hope, G.C.B. Their great-grandson, John James Hope-Johnstone, Esq. of Annandale (b. 1842; suc. 1876), lays claim to the Annandale marquessate, was Conservative member for Dumfriesshire from 1874 to 1880, and holds 64,079 acres in the shire, valued at £27,884 per annum. See ANNANDALE, LOCHWOOD, and LOCHMABEN.—*Ord. Sur.*, sh. 10, 1864.

Raemoir, a mansion in Banchory-Ternan parish, Kincardineshire, 3 miles N of Banchory. Its owner, Alexander Innes, Esq. (b. 1846; suc. 1883), holds 4750 acres in the shire, valued at £2847 per annum.—*Ord. Sur.*, shs. 76, 66, 1874-71.

Rafford, a parish, containing a village of the same name, in the NW of Elginshire. It is bounded N by Kinloss parish, ESE by the parishes of Alves and Elgin, SE by the parish of Dallas, S and SW by the parish of Edinkillie, and W by the parish of Forres. The boundary on the SE and part of the S is formed by the Lochty or Black Burn and the Loch of Romach for a distance of over 5½ miles to the source of the burn. The Burn of Altyre also forms the boundary on the S border for about ¼ mile, and the Findhorn for about ¾ mile at the extreme W corner above the point where the parishes of Rafford, Edinkillie, and Forres meet in the centre of the river. Elsewhere the line is artificial. The shape of the parish is highly irregular, a long horn-like projection of the parish of Forres indenting the western side to a depth of 3½ miles, and almost separating a northern triangular portion from the rest. This triangular portion, comprising about a third of the whole area, is united to the more compact southern portion by a neck, ¾ mile wide, to the N of Bognie. The northern part is 3 miles from NNW to SSE, and 3 miles wide along the northern border; the southern part measures 3½ miles from N to S through the village of Rafford, and fully 6½ miles from the point where the parishes of Rafford, Edinkillie, and Forres meet on the Findhorn E by N to the point where the parishes of Elgin, Dallas, and Rafford meet on the Lochty. The total area is 12,504·106 acres, of which 47·971 acres are water. The northern border is low, flat, and fertile, the centre undulating, and the S a rough upland reaching a height of 533 feet on the E side at the northern end of the road running NNW of Bognie, 731 at the middle of the same road, 833 at the top of Burgie Hill, and over 900, on the shoulder of Romach Hill on the southern border, at the source of the Lochty. The upper districts have fine views of the 'laich of Moray,' the Moray Firth, and the hills to the N of it. About 4000 acres in the centre and SW are under wood, and about as many under tillage, while the rest is mostly hill pasture or moorland. The soil along the N and centre is good strong clay or black mould; elsewhere it is clay, shallow black mould, sand, rough gravel on an almost impenetrable subsoil, or reclaimed moss. The underlying rocks are Silurian (S) and Old Red Sandstone (centre and N). A coarse grey slate in the former was once quarried, and a gritty sandstone in the latter is occasionally worked. The drainage in the N goes to a small stream that flows through Alves parish to Burghead Bay; in the SE it is carried off by the Lochty, and in the W by the streams flowing into the Altyre Burn, and that burn itself, which flows past Forres and into Findhorn Bay. On the southern border the whole of Romach Loch (⅞ mile long by 100 yards wide) is in the parish, as is also part of Loch of Blairs (3 × 2 furl.), the rest being in Forres. Both contain good trout, especially Loch of Blairs, where the fish weigh from ¼ to ¾ lb., and are red-fleshed, but they are preserved. The parish is an old one, the church having been the prebend of the sub-chanter of the diocese of Moray; but the boundaries were altered in 1657, when a small portion was given off for the new parish of Kinloss, and again in 1659, when the pre-Reformation parish of Altyre was disjoined from Dallas and added to Rafford. Near the northern border the parish is traversed for 2⅞ miles by the main road from Aberdeen to Inverness, and near the W side for 3 miles by the Forres and Perth section of the Highland Railway system, and by the road from Forres to Grantown. There are also a large number of good district roads. The principal residences are Altyre House and Burgie House, both of which are separately noticed. The whole district about Altyre House is beautifully wooded. The antiquities are Sueno's Stone in the extreme NW of the parish, which has been noticed under Forres, and Burgie and Blervie Towers, which are separately noticed. Blervie is identified with the Ulern or Vlern, where, according to some of the chroniclers, Malcolm I. was slain in 954. The old name was Blare. Near the castle are the remains of a stone circle. The site of Altyre church is on the banks of Altyre Burn, ½ mile N of Altyre House. The only distinguished native

was Dr Alexander Adam (1741-1809), a famous classical scholar and long rector of the High School of Edinburgh. The village is by road 2½ miles SE of Forres, which is the nearest railway station. There is a post office under Forres, and a cattle market is held on the second Wednesday of November.

The parish is in the presbytery of Forres and the synod of Moray, and the living is worth £315 a year. The parish church, at the village, was built in 1826 after designs by Gillespie Graham, and is a good Gothic building containing 600 sittings. There is also a Free church. Under the school board are Rafford, Burgie, and Rafford female schools, which, with accommodation for 81, 50, and 61 pupils respectively, had in 1883 attendances of 38, 42, and 57, and grants of £32, 6s., £31, 15s., and £47, 15s. 6d. There are four landed proprietors—the lairds of Altyre, Blervie, and Burgie, and the Earl of Moray. Valuation (1860) £5543, (1884) £6786. Pop. (1801) 1030, (1831) 992, (1861) 1005, (1881) 1052.—*Ord. Sur.*, shs. 85, 84, 1876.

Raigmore, an estate, with a mansion, in Inverness parish, Inverness-shire, 1 mile distant from the town. Its owner, Æneas William Mackintosh, Esq. (b. 1819), Liberal M.P. for Inverness 1868-74, holds 6556 acres in the shire, valued at £4368 per annum.

Rain. See RAYNE.

Rait. See KILSPINDIE.

Rait Castle. See NAIRN.

Raith, a mansion in Abbotshall parish, Fife, 2½ miles W of Kirkcaldy. Standing on the eastern face of a hill, and originally built in 1694, it has received the addition of two wings and a fine Ionic portico; and is surrounded by extensive and beautifully-wooded grounds, containing a picturesque artificial lake (1812) of 21 acres. Near the summit of the hill, behind the mansion, 400 feet above sea-level, stands square Raith Tower, 54 feet high, whose top commands a magnificent view of fourteen or sixteen counties. Sir John de Melville of Raith swore fealty to Edward I. in 1296; and among his descendants were Sir John Melville, beheaded for treason in 1549; Sir Robert Melville of Murdocairnie (1527-1621), created Baron Melville of Monimail in 1616; his younger brother, Sir James Melville of Hallhill (1530-1607), well known by his curious *Memoirs;* and George, fourth Lord Melville, created Earl of Melville in 1690. (See MELVILLE HOUSE.) After his death in 1707, the estate was purchased by Robert Ferguson (1690-1781); and Raith House was the birthplace of the Peninsular hero, Gen. Sir Ronald Craufurd Ferguson, M.P. (1773-1841), whose grandson, Ronald Craufurd Munro-Ferguson, Esq. (b. 1860; suc. 1868), holds 7135 acres in Fife, 3350 in Elginshire, and 14,582 in Ross-shire, valued at £13,919, £2529, and £3603 per annum, his father having succeeded to the estates of Muirton and Novar in 1864. His grand-uncle and father represented the Kirkcaldy burghs from 1831 to 1861; and he himself was elected Liberal M.P. for Ross-shire in 1884. A *quoad sacra* parish of Raith, formed out of Abbotshall in 1883, is in the presbytery of Kirkcaldy and the synod of Fife. Its church is the former Free church of Abbotshall, acquired by the Establishment in 1875, and reopened after reconstruction at a cost of over £5000 on 9 Sept. 1883.—*Ord. Sur.*, sh. 40, 1867.

Ralston, an estate in Abbey parish, Renfrewshire, 1¾ mile E of Paisley From an early period down to the beginning of the 18th century it belonged to a family of its own name, originally called Ralphston from their ancestor Ralph; and in 1800, with some exception, it was acquired by William Orr, Esq., who had previously purchased from the Earl of Glasgow a part of the adjacent estate of Ingliston, and who erected there a handsome mansion called Ralston House.—*Ord. Sur.*, sh. 30, 1866.

Rammerscales, a modern mansion in Dalton parish, Dumfriesshire, 3½ miles S of Lochmaben. Standing on a high eastward slope of the Torthorwald Hills, and surrounded with a fine expanse of hanging wood, it commands a view of the greater part of Annandale. Its owner, William Bell Macdonald, Esq. (b. 1845; suc. 1862), holds 1050 acres in the shire, valued at £1188 per annum.—*Ord. Sur.*, sh. 10, 1864.

Ramornie, a mansion in Kettle parish, Fife, 7 furlongs E of Ladybank Junction. Its owner, Andrew Agnew Maitland-Heriot, Esq. (b. 1851; suc. 1881), holds 1050 acres in the shire, valued at £2115 per annum.—*Ord. Sur.*, sh. 40, 1867.

Ramoth, a village in Kilmadock parish, Perthshire, 3 miles ESE of Thornhill.

Ramsaycleugh, a hamlet in Ettrick parish, Selkirkshire, on the left bank of Ettrick Water, 18 miles SW of Selkirk, under which it has a post office.

Ranfurly Castle. See KILBARCHAN.

Rangag, Loch. See LATHERON.

Range Castle. See ALMAGILL.

Rankeillour, Nether, an estate, with a mansion, in Collessie parish, Fife, 2 miles NE of Ladybank. It was sold to Mr B. Nairn, of Kirkcaldy, in 1876 for £43,550.

Rankeillour, Over or **Upper,** a fine mansion in MONIMAIL parish, Fife, 3 miles W by S of Cupar. It was built by General John Hope, afterwards fourth Earl of Hopetoun; and has splendidly wooded grounds. The estate, which belonged originally to a family of the name of Rankeillour, at an early period went to a branch of the Sibbalds of Balgonie; and, passing in the time of Charles II. to Sir Archibald Hope, grandson of the celebrated Sir Thomas Hope of Craighall, is now the property of H. W. Hope, Esq. of LUFFNESS.—*Ord. Sur.*, sh. 40, 1867.

Rankle Burn, a stream of Ettrick parish, Selkirkshire, rising at an altitude of 1350 feet, within ¼ mile of Moodlaw Loch, at the meeting-point of Selkirk, Dumfries, and Roxburgh shires, and winding 9⅞ miles northward—for 2¾ miles along the Roberton, and for ¾ mile along the Kirkhope, boundary—till, after a total descent of 635 feet, it falls into Ettrick Water opposite Tushielaw Tower. It traverses first a wildly moorish tract, afterwards a deeply sequestered pastoral glen; is sung in the ballad of the *Maid of the Rankle Burn;* and abounds in small trout.—*Ord. Sur.*, sh. 16, 1864.

Rannoch, Loch, a lake of Fortingall parish, NW Perthshire. Extending 9⅝ miles eastward to within 300 yards of Kinloch-Rannoch (21 miles W by N of Pitlochry), and lying at an altitude of 668 feet above sea-level, it has a width near its head of only ¼ mile, but lower down broadens to from 5½ to 9 furlongs. Throughout its greater part, especially towards the foot, its depth is from 60 to 85 fathoms; and it freezes so well in hard frost at the W end that persons can cross there on the ice, though the whole surface is not frozen over oftener, on an average, than once in 30 or 40 years. It abounds in small trout and large salmoferox; receives at its head the GAUIR coming from Loch Lydoch, at a point 7 furlongs from its head on the N side the ERICHT coming from Loch Ericht, at other parts of its sides Killichouan, Aulich, Slocna-Creadha, Dall, and Bogair Burns; discharges all its superfluence at the foot in the river TUMMEL; and contains near its head an artificial crannoge, on which is a modernised keep. Flanked along both its sides by ranges of upland receding from brae and hill to lofty mountain, it is sky-lined in the distant W by the peaks of Buachaille-Etive and Glencoe, and nearly overhung in the near SE by the vast isolated mass of Schiehallion. Cornfields and birch woods adorn the skirts and lower braes of its northern flank; and a great pine forest, the Black Wood of Rannoch, runs far up all its southern acclivities, so that, viewed in connection with the basins of its contributary waters, and with the diversities and the distances of the horizon lines, it makes a vast and imposing display of magnificent scenery. At its head, 12 miles by road W by S of Kinloch-Rannoch, is Rannoch Lodge (Sir Robert Menzies, Bart. of Castle-Menzies); and ¾ mile to the SW is Rannoch Barracks (Struan-Robertson).—*Ord. Sur.*, shs. 54, 55, 1873-69.

The district of Rannoch is bounded NW by Lochaber, N by Badenoch, E by Blair Athole, S by the Fortingall and Glenlyon sections of Breadalbane, and W by

Glenorchy and Appin. Its greatest length, from E to W, is 28 miles; its greatest breadth is 15 miles; and its area is about 290 square miles. The central part, from the eastern boundary to the extent of 22 miles westward, exhibits the picturesqueness of the glen and screens of Loch Rannoch; the northern part, excepting a small section on its northern border occupied by a portion of wild Loch Ericht, consists entirely of bare, lofty, indomitable masses of the Central Grampians, variously peaked with soaring summits, expanded into plateaux of moor and loch, and cloven in their lower declivities with narrow glens; the southern part, all comparatively of small breadth, consists of the northern declivities and spurs of the hills and mountains flanking the N side of Fortingall and Glenlyon; and the western part is Rannoch Muir, the largest and dreariest moor in Scotland, lying at a mean elevation of 1000 feet above sea-level, all an open, monotonous, silent, black expanse of desert, a vast and dismal mixture of bog, morass, heath, and rock, streaked in the centre with long dreary Loch Lydoch; diversified elsewhere with only a few marshy pools, and some ditchy naked lines of dark water-course; and environed in the distance by rough, bleak, dark mountains, in rueful keeping of aspect with its own sable sea of moss.

'Amid this vast tremendous solitude,
Where nought is heard except the wild wind's sigh,
Or savage raven's deep and hollow cry,
With awful thought the spirit is imbued!
Around, around, for many a weary mile,
The alpine masses stretch; the heavy cloud
Cleaves round their brows, concealing with its shroud
Bleak, barren rocks, unthawed by summer's smile.
Nought but the desert mountains and lone sky
Are here; birds sing not, and the wandering bee
Searches for flowers in vain; nor shrub, nor tree,
Nor human habitation greets the eye
Of heart-struck pilgrim; while around him lie
Silence and desolation, what is he!'

Ranza. See LOCHRANZA and GLENRANZA.

Raploch, a village in Stirling parish, Stirlingshire, adjacent to the Forth and Clyde railway, immediately under the NW side of Stirling Castle, ⅔ mile W of Stirling Bridge, and within the parliamentary burgh. It was the birthplace of Dugald Graham (1724-79), the author of a rhyming *History of the Rebellion.* See GLASGOW, p. 144.

Rasay. See RAASAY and BLACKWATER.

Ratagan. Ses MAAM-RATAGAIN.

Rathen (? Gael. *Rath-aan,* 'the fort on the river'), a parish containing a hamlet of the same name on the NE coast of the Buchan district of Aberdeenshire. It is bounded N by Fraserburgh parish, NE by the German Ocean, SE by the parish of Lonmay, SW by the parish of Strichen, W by a detached portion of the parish of Fraserburgh, and NW by the parish of Tyrie. The boundary with Fraserburgh is formed for 2¼ miles by the Rathen or Philorth Burn to its mouth, 2 miles SE of the town of Fraserburgh, and then extends along the sea-shore for 2⅔ miles. Elsewhere the line is artificial. On the coast is Cairnbulg Point, flanking the E side of Fraserburgh Bay. The greatest length of the parish, from NE to SW, is 6½ miles; the greatest breadth, 3⅔ miles; and the area, 9789·758 acres, of which 177·581 are foreshore and 24·971 water. The coast is partly flat and sandy, and partly formed by low rocks; and the surface adjoining both coast and burn is flat and well cultivated. In the SW the ground sweeps up to the ridge culminating in Mormond Hill (769 feet), on the borders of the parishes of Rathen, Strichen, and Fraserburgh, and here the appearance is bleak and barren. Of the land area of 9587 acres, about 200 are planted, about 1800 are rough pasture, and the remainder is under cultivation. The soil varies from a strong alluvium to a poor moorish earth. The underlying rocks are Silurian, and the beds of limestone are worked. The drainage is mostly carried off by the Rathen Burn, which has a course of 3 miles through the parish, and 2¼ along the border, and the smaller streams that flow into it. As might be expected from its vicinity to DEER, Rathen has associated with it the names of two of the early Culdee missionaries—St Ethernan, who is said to have had his hermitage in St Ethernan's Den, on the E side of Mormond Hill; while a hillock and well, about ½ mile from the church, are associated with the name of St Oyne or Eyen. The old church is one of the most ancient in Aberdeenshire, and consisted of a nave with an aisle to the S, the latter erected by the Frasers of Memsie* in 1646. The belfry bears date 1782, and L. A. S., for Lord Abernethy and Saltoun; and the bell has the inscription, 'Peter Jansen, 1643.' The year after the manufacture of the bell, the church was the scene of one of the many 'omens that were seene in diverse parts of the kingdome,' during the great struggle between Argyll and Montrose. 'At Rethine in Buchan,' says Patrick Gordon, the author of *A Shorte Abridgement of Britain's Distemper,* 'there was about the tyme of morneing prayer for diverse dayes togithir, hard in the church a queire of musicke, both of woces, organes, and other instruementes, and with such a ravisheing sweetnes that they ware transported which, in numbers, resorted to heire it with unspeakable pleasure and never wiried delight. The preacher on day being much takin with the harmonie, went with diverse of his parisheners in to the church, to try if there eyes could beare witnes to what there eares had hard, but they ware no sooner entred when, lo, the musicke ceassed with a long not, or stroke of a *wioll de gambo;* and the sound came from ane upper lofte where the people used to heare service, but they could sie nothing.' It underwent repair in 1767, but was finally replaced in 1870 by a new church, a Gothic building with a spire, erected to the E of the old site. The ancient parish comprehended also part of Fraserburgh and the greater part of Strichen. The church was given by Marjory, Countess of Buchan, to the Abbey of Arbroath; and in 1328, Robert Bruce granted the benefice to the college and canons of Old Machar. The chief residence is Mormond House; Memsie House being now used as a farm-house. Both are separately noticed, as are also the Memsie Cairns and Cairnbulg and Inverallochy Castles. Trefor Hill, SE of the church, had, until some years ago, trenches and walls of earth and stone on it, so that it seems to have been a place of strength, and possibly the *rath* from which the parish takes its name. According to Peter Buchan, in his *Gleanings of Scarce Old Ballads,* the Jacobite songs of *Whirry, Whigs awa' Man,* and *Logie o' Buchan,* were written by George Hacket, schoolmaster of Rathen, 'in the years 1736 and 7;' and it is added that he also wrote a Dialogue between George II. and the Devil, which was so obnoxious that the Duke of Cumberland offered a reward of £100 for the discovery of the author. Hacket was schoolmaster, not in 1736-37, but from 1714 to 1725, when he was deposed from office as having 'come to that hight of impudence as to deny all the faults he stands guilty of, and will not be convinced or made sensible of his miscarriages, and he having relapsed again and again, and no reformatione of heart or of ways to be found in him.' He seems subsequently to have taught adventure schools at Cairnbulg, Memsie, and Tyrie. There is no evidence for or against the reputed authorship, which rests entirely on Buchan's assertion. The parish is traversed by the main roads from Ellon and Peterhead to Fraserburgh and also by the Formartine and Buchan section of the Great North of Scotland railway, on the Fraserburgh branch of which there is a station of Rathen, 44¼ miles N of Aberdeen, and 2½ S of Fraserburgh. Besides the hamlet, which is ⅔ mile W of the station, the parish contains also the villages of Inverallochy, Cairnbulg, and Charleston, all of which are separately noticed.

The parish is in the presbytery of Deer and synod of Aberdeen, and the living is worth £223 a year. It gives off the *quoad sacra* parish of INVERALLOCHY. The parish church has been already noticed. There is

* The Frasers of Memsie were cadets of Fraser of Philorth, from which family they branched off in 1482.

also a Free church, 2½ miles SSW of Inverallochy. Under the school board, Rathen and Inverallochy public schools, with accommodation for 230 and 300 pupils respectively, had (1884) an average attendance of 93 and 223, and grants of £86, 3s. 6d. and £166, 5s. Six proprietors hold each an annual value of £500 and upwards, 4 hold each between £500 and £100, and there are 2 of smaller amount. Valuation (1860) £8071, (1885) £11,033, 2s. 7d., including £909 for railway. Pop. (1801) 1588, (1831) 2100, (1861) 2554, (1871) 2850, (1881) 2825, of whom 1372 were males and 1453 females, while 1248 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 97, 1876.

Rathillet, a small village, with a U.P. church, in Kilmany parish, Fife, 4½ miles N by W of Cupar. The estate of Rathillet belonged for ages, till about 1772, to the family of Halkerstone or Hackston, of whom David Hackston was one of the murderers of Archbishop Sharp on MAGUS MUIR.—*Ord. Sur.*, sh. 48, 1868.

Rathmuriel. See CHRIST'S KIRK.

Ratho, a village and a parish of Edinburghshire. The village stands 1250 to 320 feet above sea-level, near the S bank of the Union Canal, 1¼ mile S by E of Ratho station on the North British railway, this being 8¼ miles WSW of Edinburgh, and 9¼ ESE of Linlithgow. Its sight is the slope or eastern declivity of gentle uplands; and it consists of a single street, coming down the declivity from W to E, and bending northward, near the end, to terminate on the canal. Most of its houses are neat whinstone cottages, lintelled with sandstone, and roofed with either tiles or slate. Anciently a place of considerable note, Ratho fell into great decay, but has in modern times been revived, extended, and much improved. In a poem by Joseph Mitchell, who published two large octavo volumes of miscellaneous poetry in 1724, and who is known as 'the poet of Ratho,' it figures as having at one time risen to splendour, and then at another time sunk to desolation, till 'Ratho looked like Troy a field of corn.' It has now a post office, with money order, savings' bank, and telegraph departments, a police station, and gas works. Pop. (1838) 539, (1861) 658, (1871) 717, (1881) 713.

The parish is bounded W and NW by Kirkliston, N by Kirkliston and Corstorphine, SE by Currie, and SW by Kirknewton. Sending off a long, narrow, south-south-westward projection, it has an utmost length from NNE to SSW of 5½ miles, a varying width of 5 furlongs and 5 miles, and an area of 6168¾ acres, of which 21½ are water. Almost the only stream, and that a tiny one, is Gogar Burn; but the UNION CANAL (1822) goes 3¼ miles north-westward and westward across the interior. With a gentle southerly rise from 132 to 350 feet above sea-level, the surface of the main body in its eastern half is a slightly variegated level; in its western is a congeries of broad-based hillocks or low table-land, with gentle swells. As the position is midway between the Pentland Hills and the Firth of Forth, and about 8 or 9 miles W of Edinburgh, magnificent views are obtained from the little heights of the scenery of the Lothians, the Forth, Fifeshire, the Ochils, and the frontier Grampians. The surface of the southern or projecting district rises slowly from a low line of connection with the main body to near the southern boundary; and it there shoots abruptly up in the two bold isolated heights of Dalmahoy and Kaimes Hills, each 800 feet above sea-level. These form a conspicuous and picturesque feature of the general Lothian landscape; and, like Salisbury Craigs, the rocks of Edinburgh and Stirling Castles, and various eminences at the NE end of the Lennox Hills, they break down in cliffs, or stoop precipitously to the W. The general aspect of the parish, from the diversity of its contour and the richness of its embellishments, possesses much beauty, and presents many fine close scenes. Nearly six-sevenths of the entire area are either in tillage or in an arable condition; and the remaining seventh is distributed, in not very unequal parts, into plantations and pasture. The soil is, in general, a light loam, with a preponderance of sand; but, towards the eastern border, it passes, in a great degree, into clay. Except for intrusions of diorite in the W, and of basalt in the southern hills, the rocks belong to the Calciferous Sandstone series. The basalt and sandstone have both been quarried; whilst claystone, or 'calmstone,' was formerly worked upon the property of Ratho Hall. Coal is said to have been mined long ago at Bonnington, but cannot now be found. The only noticeable antiquities are vestiges of two camps, both probably Danish, the one on Kaimes Hill, the other on South Platt Hill, a commanding little summit on the W. In 1315 the barony and patronage of Ratho were, along with much other property, granted by Robert I. to the Steward of Scotland, as the dowry of the Princess Marjory; and on the accession of Robert II. to the throne in 1371, they became part of the property of the king's eldest son as prince of Scotland, for whom, in 1404, they and the other estates were erected into a principality with regal jurisdiction. Among eminent persons connected with the parish were William Wilkie, D.D. (1721-72), 'the Scottish Homer,' who was for six years minister; Sir Robert Liston, G.C.B. (1742-1836), British ambassador at seven courts, who spent his last years at Millburn; and Sir William Fettes (1750-1836), another resident and heritor, whose vast property was bequeathed for the founding at Edinburgh of the great Fettes College. Ratho Park, ¾ mile E by N of the village, is a good modern Grecian building, with beautiful grounds. Other mansions, noticed separately, are ASHLEY, DALMAHOY, HATTON, MILLBURN TOWER, and NORTON; and 12 proprietors hold each an annual value of £500 and upwards, 5 of between £100 and £500. Ratho is in the presbytery of Edinburgh and the synod of Lothian and Tweeddale; the living is worth £422. Standing near the village, on the opposite side of the canal, and embowered by ancient trees, the church is a somewhat cruciform structure, part old, part modern, its Dalmahoy aisle bearing date 1683. It contains 750 sittings. There is a Free church designated of Ratho and Kirknewton; a pretty little Roman Catholic church, St Mary's, with 100 sittings, was opened in 1883; and 1 mile SSE of the village is St Mary's Episcopal church of Dalmahoy. Three schools—Ratho public, Ratho female, and Dalmahoy Episcopalian—with respective accommodation for 167, 82, and 119 children, had (1884) an average attendance of 93, 58, and 104, and grants of £84, 3s., £49, 16s., and £96, 18s. Valuation (1860) £12,764, (1885) £16,486, *plus* £4978 for railway. Pop. (1801) 987, (1831) 1313, (1861) 1659, (1871) 1744, (1881) 1815.—*Ord. Sur.*, sh. 32, 1857.

Rathven, a coast parish of NW Banffshire, containing the town of BUCKIE, part of the royal burgh of CULLEN, and the four fishing villages of PORTKNOCKIE, FINDOCHTY, PORTESSIE, and PORT GORDON, all of which are noticed separately. A fifth, the pretty little village of Ianston, between Buckie and Portessie, has risen up since 1879, and, owing to its situation, will become an important place. The parish is bounded NW by the Moray Firth, NE by Cullen Bay, E by Cullen, SE by Deskford and Keith, and W by Bellie. Its utmost length, from ENE to WSW, is 8¼ miles; its breadth diminishes eastward from 5⅝ to 3 miles; and its area is 36⅘ square miles or 23,551 acres, of which 40⅓ are water and 345 foreshore. The coast-line, 9½ miles in extent, is little indented by bay or headland, but rises steeply from the sea to 87 feet near Port Gordon, 75 at Buckie Newtown, 116 at the Law Hillock, and 177 near Portknockie. Three caverns of unknown extent bear the name of Farskane's, Janet Corstair's, and Cross Caves. The Burn of TYNET runs 5½ miles north-by-westward along most of the western, and the Burn of DESKFORD, 2⅝ miles north-north-westward along all the eastern, boundary; whilst several rapid rivulets drain the interior to the Moray Firth. That part of the parish between the shore and the road from Cullen to Fochabers attains a maximum altitude of only 271 feet at a point 7 furlongs SSE of Findochty; but the rest of the surface is very hilly, from E to W attaining 802 feet at the Little Bin, 1050 at the wooded, cairn-

crowned Bin Hill of Cullen, 900 at the Hill of Maud, 893 at Addie Hill, 948 at the hill of Stonyslacks, and 987 at Millstone Hill. A very pure quartzy rock is found in the Bin; metamorphic rocks, including gneiss, mica slate, clay slate, and other schists, prevail along the coast; greywacke alternates in some parts with the mica slate and the clay slate; Old Red sandstone occurs in the NE, and goes into conjunction with greywacke; limestone has been worked at Nether Buckie; and a beautiful whitish sand, said to be almost equal to the finest found in Holland, is plentiful near Litchieston. Medicinal springs, formerly held in high repute, are in three places; and springs of pure water are numerous, copious, and perennial. The soil, in one corner a light and extremely rich loam incumbent on clay, in another corner a thin yet fertile loam on a soft red subsoil, elsewhere alternates between a light sand and a stiffish clay; and almost everywhere, except in the sandy places, is profusely strewn and intermixed with small boulders. Less than one-third of the entire area is in tillage; rather more than 4000 acres are under wood; about 400 are meadow and grass land; and the rest of the parish is either pastoral or waste. Antiquities are a number of cairns on the heights of Corriedown; many tumuli on the field of the Battle of the Bauds;* a portion of Findochty Castle on Mains of Findochty farm; the ruins of Green and Tronach Castles near Portknockie; and remains of a pre-Reformation chapel near Farskane. Two wings still standing of the old mansion of Rannas are occupied by a farmer. The Rev. Alexander Geddes, LL.D. (1737-1802), an eccentric Roman Catholic divine, was born of crofter parents at Pathhead, which was also the birthplace of Alexander Paterson (1766-1831), Roman Catholic Bishop of Edinburgh. The parish is traversed by a branch of the Highland railway from Keith to Buckie, and by one of the Great North of Scotland railway from Elgin to Portsoy—both commenced in 1883. At Inchgower, 1¼ mile from Buckie, is the large distillery of J. Wilson & Co. Mansions, noticed separately, are Letterfourie, Cairnfield, and Tannachy; and 5 proprietors hold each an annual value of £500 and upwards. Including all Buckie and Seafield *quoad sacra* parishes and most of Enzie, this parish is in the presbytery of Fordyce and the synod of Aberdeen; the victual stipend is 22 chalders, with a glebe worth £14. The parish church, ⅔ mile SSE of Portessie, was built in 1794, and contains 1000 sittings. At Preshome, 3 miles SSE of Port-Gordon, is St Gregory's Roman Catholic church (1789; 450 sittings); and other places of worship are noticed under Buckie, Enzie, and Portknockie. Besides the three schools at Buckie, five public schools—Arradoul female, Findochty infant, Portknockie, Rathven, and Shielburn—with respective accommodation for 71, 100, 250, 300, and 60 children, had (1884) an average attendance of 48, 68, 187, 284, and 43, and grants of £46, 17s., £56, 18s., £157, 13s. 6d., £274, 8s. 10d., and £52, 12s. 6d. Valuation (1860) £13,159, (1884) £28,646. Pop. (1801) 3901, (1831) 6484, (1861) 8240, (1871) 10,199, (1881) 11,180, of whom 3229 were in the ecclesiastical parish of Rathven.—*Ord. Sur.*, shs. 95, 96, 85, 86, 1876. See the Rev. Dr J. F. S. Gordon's *Book of the Chronicles of Keith, Rathven*, etc. (Glasg. 1880).

Ratter, a hamlet in Dunnet parish, Caithness, near the coast, 7 miles NE of Castletown.

Rattray, a town and a parish in Strathmore district, E Perthshire. The town stands on the left side of the river Ericht, opposite Blairgowrie, of which it is virtually a suburb, and with which it is connected by a four-arch bridge, repaired and widened in 1871. It comprises the villages of Old Rattray and New Rattray, the latter (not yet a century old) lying close to the river, the former ½ mile to the NE; and it is a burgh under the General Police and Improvement (Scotland) Act of 1862. Flax and jute spinning is the staple industry; and there are two post offices under Blairgowrie (Old and New Rattray), two inns, a curling club, a fair on the Tuesday after 11 Feb., the parish church (1820; 620 sittings), a Free church, and a U.P. church. Pop. (1871) 2161, (1881) 2533, of whom 1501 were females. Houses (1881) 402 inhabited, 19 vacant, 3 building.

The parish is bounded N by the Drimmie section of Bendochy and by Alyth, E by the Creuchies section of Blairgowrie and by Bendochy proper, and S, SW, and W by Blairgowrie proper. Its utmost length, from N by W to S by E, is 5½ miles; its breadth increases southward from 1⅜ furlong to 2⅜ miles; and its area is 5457 acres, of which 75½ are water, and 848 belong to its Bleaton or detached portion (1¾ × 1⅛ mile), which, lying 3½ miles NNW of the nearest point of the main body, and 11½ N by W of Blairgowrie, is bounded NE, SE, and S by Alyth, W by Caputh (detached), and NW by Kirkmichael. The Black Water for 2¼ miles traces all the north-western and western boundary of this detached portion; whilst the Ericht, which is formed 3½ miles lower down by the confluence of the Black Water and the Ardle, winds 7¼ miles south-by-eastward and eastward along all the western, south-western, and southern boundary of the main body. Over most of this course the Ericht is a romantic stream, overhung with copsewood, chiefly small oaks; and above Craighall its banks are sheer precipices of rock, upwards of 200 feet high, crowned with plantation, and parapeted with wall, to keep cattle and strangers from falling over. In the extreme S the surface declines to 190 feet above sea-level, and thence it rises gradually northward until, at the boundary with the Creuchies section of Blairgowrie, it attains a maximum altitude of 909 feet above sea-level. Thus the main body, for 1¼ mile from the southern boundary, is flat, or very gently ascending; and, over the rest of the area, consists of the lowest and slowly graduated heights which, several miles beyond the northern boundary, attain a Grampian elevation. The fine southern exposure, combined with the bield afforded by the vast mountain-rampart in the comparatively near distance, renders the situation pleasant and the climate very healthy. The lands in the S have a dry and pretty fertile soil, and are all arable; those in the N are disposed chiefly in pasture. The Bleaton or detached portion, which rises eastward from 795 to 1247 feet, forms part of the ascending ranges of the frontier Grampians. The rocks are variously igneous, Devonian, and Silurian. On an oblong mound called the Castle Hill, 1⅛ mile E by S of Old Rattray, are vestiges of the ancient castle of Rattray, a very large building, the original residence of the Rattray or De Rattrieff family. On the farm of Standingstanes, which hence received its name, are remains of a stone circle. Mansions, noticed separately, are Craighall and Glenericht. A third, Parkhill, ¾ mile N of Old Rattray, is the seat of Charles Hill-Whitson, Esq. (b. 1840; suc. 1881), who owns 998 acres in the shire, valued at £1389 per annum. In all, 4 proprietors hold each an annual value of £500 and upwards, 13 of between £100 and £500. Giving off its detached portion to Persie *quoad sacra* parish, Rattray is in the presbytery of Dunkeld and the synod of Perth and Stirling; the living is worth £257. Two public schools—Craig Mill and Rattray—with respective accommodation for 95 and 243 children, had (1884) an average attendance of 62 and 262, and grants of £42, 10s. and £220, 3s. Valuation (1866) £9104, 16s. 9d., (1884) £13,182, 0s. 2d. Pop. (1801) 880, (1831) 1362, (1861) 2161, (1871) 2610, (1881) 3051, of whom 3018 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 56, 1870.

Rattray, a commodious mansion in Crimond parish, NE Aberdeenshire, 7¾ miles NNW of Peterhead, and 4 ESE of Lonmay station. Its owner, James Cumine, Esq. (b. 1810; suc. 1841), holds 1696 acres in the shire, valued at £1293 per annum.—*Ord. Sur.*, sh. 87, 1876.

Ravelrig, an estate, with a mansion, in Currie parish, Edinburghshire, near the left bank of the Water of Leith, 1¾ mile SW of Currie village.

Ravelston, a mansion in Corstorphine parish, Edin-

* The 'Battle of the Bauds' is said to have been fought in 962 between the Norwegians and Indulph, King of Alban, who, after gaining a complete victory, himself was slain at 'Inverculen;' but Dr Skene is inclined to believe that Indulph retired to the monastery of Kilrymont or St Andrews.

burghshire, near the E skirt of Corstorphine Hill, 1¼ mile WNW of Murrayfield station, and 2½ miles W of the centre of Edinburgh. The estate belonged about 1600 to George Foulis, whose son was created a baronet in 1661. Sir Archibald, second Bart., executed at Carlisle for his share in the '45, took the name of Primrose about 1700 on succeeding to the estate of Dunipace, and sold Ravelston in 1726 to Alexander Keith, W.S., a *soi-disant* descendant of the third Earl Marischal. His son, Alexander (1705-92), built the present mansion, and here was often visited by his kinsman, Sir Walter Scott, who took from the formal old-fashioned gardens some of the features of 'Tully-Veolan' in *Waverley*. His son received a baronetcy in 1822, when he acted as Knight Marischal to George IV.'; and after his death in 1832 Ravelston went to his son-in-law, Sir William Keith Murray, Bart. of OCHTERTYRE, whose son, Sir Patrick, sold it in 1872 to his uncle, John Murray-Gartshore, Esq. (b. 1804). The latter has made a handsome addition to the house, and holds 294 acres in Midlothian, valued at £1388 per annum.—*Ord. Sur.*, sh. 32, 1857. See Jn. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Ravenscraig or **Ravensheugh Castle,** a ruin in Dysart parish, Fife, on a sea-cliff 1 mile SW of Dysart town. It was given, with circumjacent lands, by James III., to William Sinclair, third Earl of Orkney, in 1470; was long the seat of the Lords Sinclair; continued to be inhabited in the time of Oliver Cromwell; and now is interesting mainly for its associations.—*Ord. Sur.*, sh. 40, 1867.

Ravenscraig, a station in Innerkip parish, Renfrewshire, on the Wemyss Bay railway, 2 miles SW of Upper Greenock station.

Ravenscraig Castle. See PETERHEAD.

Ravenshall, a hamlet on the N border of Falkland parish, Fife, 1½ mile N by W of Falkland town.

Ravenshall Point, a small headland in KIRKMABRECK parish, Kirkcudbrightshire, on the E side of the estuary of Cree Water or upper part of Wigtown Bay, 6¼ miles SW of Gatehouse-of-Fleet. The coast around it is pierced with curious caves, and contests, with the shores of the Nith's estuary, the claim of being the scene of Sir Walter Scott's *Guy Mannering*.—*Ord. Sur.*, sh. 4, 1857.

Ravensheugh. See RAVENSCRAIG, Fife.

Ravensnook Castle, an old baronial fortalice in Penicuik parish, Edinburghshire, on the right bank of the North Esk, opposite Penicuik House. It belonged to Oliver Sinclair, commander-in-chief of the forces in the time of James V., and it is now reduced to fragmentary ruins.

Ravenstone, a fine old mansion, with well-wooded policies, in Glasserton parish, SE Wigtownshire, on rising ground, 5 miles NW of Whithorn. It is the Scotch seat of Lord BORTHWICK.—*Ord. Sur.*, sh. 4, 1857.

Ravenstruther, a village in Carstairs parish, Lanarkshire, 2⅞ miles ENE of Lanark, under which it has a post office.

Ravenswood, a mansion in Melrose parish, Roxburghshire, on the right bank of the Tweed, opposite the influx of Leader Water, 2 miles E of Melrose town. It was built in 1827, and enlarged in 1860 and 1866.—*Ord. Sur.*, sh. 25, 1865.

Rawyards. See AIRDRIE.

Rayne (formerly *Rane*, *Raine*, *Rain*, and *Rayn;* Gaelic *raon*, 'a field of good ground'), a parish of central Aberdeenshire, containing at its SW border the village of Old Rayne, 1⅝ mile NNE of Oyne station, and 3½ miles E by N of Insch, under which it has a post office. Here is a granite market-cross, nearly 12 feet high, erected probably towards the close of the 17th century, when John Horn of Westhall, superior of Old Rayne, was empowered to constitute it a burgh of barony; and Lawrence Fair, a large horse market, is still held here on the Wednesday after the first Tuesday of August, *o. s.* Containing also MEIKLE-WARTHILL village, the parish is bounded N by Auchterless, NE by Fyvie, E by Daviot, SE by Chapel of Garioch, S and SW by Oyne, and W by Culsalmond. Its utmost length, from N to S, is 5 miles; its breadth varies between ¼ mile and 4¾ miles; and its area is 7890¾ acres, of which 5¾ are water. The drainage goes mostly to the river URY, which flows 2⅛ miles south-eastward along the south-western border; but the Black Burn, an affluent of the Ythan, traces the Auchterless boundary. In the extreme S, on the Ury, the surface declines to 270 feet above sea-level; and thence it steadily rises to 486 feet on the highest ground to the S of Drum's Cairn, to 491 at the parish church, and to 854 on the top of Rothmaise Hill. This last, near the northern border, is now all cultivated, except a piece around the summit, which has been planted. To the S there used to be a stretch of moss, extending from E to W; but it has now been nearly all brought under tillage. The NE corner of the parish, along the Fyvie border, is occupied by a considerable tract known as the Warthill Moss, but the peat is being gradually exhausted, and at no distant time the ground will doubtless become ploughed land. The prevailing rocks are greenstone or whinstone in the southern and central parts of the parish; and in the northern, claystone, with a schistose tendency on exposure. These are used for building purposes. There is no granite, though it abounds in the parishes to the S of the Ury. The soil of the arable lands is either a rich loam incumbent on clay, or a shallower and more gravelly loam incumbent on till or rock; and it is generally of good fair quality, but wants lime. About four-fifths of the area are in tillage, and upwards of 350 acres are under wood. Agriculture is in an advanced state, and is carried on by an intelligent, industrious, and well-behaved people. The farms are all of moderate size, with a considerable number of crofts. The farmhouses and steadings on the larger holdings are generally good, but the crofters' and cottars' houses are in some districts very indifferent, and sorely need improvement. There are or were a number of cairns in the parish, near all of which sepulchral remains have been found. Drum's Cairn, now almost vanished, on the moors of Rayne, owes its name to a tradition that Irvine, the laird of Drum, was slain there while in pursuit of Donald of the Isles after the battle of Harlaw; and Tullidaff's Cairn, in the NE corner of the Stobcors Wood, is so called from its being the reputed scene of the slaughter of the last of the Tullidaffs of that ilk, in revenge of the supposed murder of the first Leslie of Warthill in Lowran Fair. About ¼ mile SE of Old Rayne, on the Candle Hill, is a Druidical or stone circle, and on the E side of Rothmaise there are traces of another; where, also, are to be seen the Crichton and Federate Stones, said to point out the spot where certain members of these families had a fatal encounter. The Bowman Stone, a little to the W of the church, points to the place where the parishioners used to meet to practise archery. The great Roman road from the Dee at Peterculter to the camp at Glenmailen on the Ythan, crossing the Ury a little above Pitcaple Castle, would pass right through Rayne; and at Freefield there is a grassy mound, 60 yards in circumference, and formerly of considerable height, called the Spy Hill, and conjectured with much probability to have been originally one of its signal stations. It is on the probable line, and traces of the road are found in the vicinity. The whole parish from very early times belonged to the Bishops of Aberdeen, and at Old Rayne they had a residence situated on a small moated eminence where the new public school now is, in digging the foundations of which traces of former buildings and certain remains were found. John Barbour, the father of Scottish poetry and author of *The Bruis*, was parson of Rayne in the latter half of the 14th century; and he seems to have been almost immediately succeeded in the same office by the famous priest Lundy, chaplain to Douglas, and one of the heroes of Otterburn. Mr John Middleton, minister of Rayne during the supremacy of the Covenant, and one of the chaplains to General Middleton's forces in the north, died in 1653, and his memory is perpetuated in the following curious epitaph on a slab of

Foudland slate close to the S wall, but outside the church—

> 'Whereas I stood in pulpit round,
> And now I ly alow the ground;
> When as you cors my corps so cold,
> Remember the word that I you told.'

William Leslie (1657-1727), a son of a laird of Warthill, rose, from being schoolmaster of Chapel of Garioch, to be Bishop of Laibach and metropolitan of Carniola and a prince of the Holy Roman empire. Mansions, noticed separately, are Freefield and Warthill; and the landed property is divided among eight. Rayne is in the presbytery of Garioch and the synod of Aberdeen; the living is worth £275. The parish church stands 2⅜ miles NE of Old Rayne, and 1 mile W of Warthill station, this being 3¾ miles NNW of Inveramsay Junction. It was built in 1789, and contains 544 sittings. The belfry belonged to the previous church, and has on it the initials M. W. A. (Mr Walter Abercrombie, then minister of Rayne), and the date 1619. The church occupies a prominent position on the table-land, and has long been known as 'the white kirk of Rayne.' The old part of the manse has the date 1627 on one of the skewstones, but it has been from time to time repaired, enlarged, and altered. It is a fair house of its kind. The old parish school was in the Kirktown, but it was discontinued and sold, and the North public school and residences (cost over £2000), situated 1 mile N of the church at the cross roads at Cockmuir, were opened in 1877. A new public school and residence (cost over £700) was erected at Old Rayne, and opened in 1880. The former school has accommodation for 150 and the latter for 76 children, and they had (1883) respectively an average attendance of 91 and 77, and grants of £89, 2s. 6d. and £73, 14s. There has long been a side school at Meikle-Warthill, not under public management. Valuation (1860) £7122, (1885) £8711, 13s. 6d., *plus* £470 for railway. Pop. (1801) 1228, (1831) 1484, (1851) 1550, (1871) 1409, (1881) 1284.—*Ord. Sur.*, shs. 86, 76, 1876-74.

Reasort, Loch. See Resart.

Reawick, an estate, with a mansion and a Congregational chapel, in Sandsting parish, Shetland, on the W side of Scalloway Bay, 6 miles WNW of Scalloway.

Reay, a village of NW Caithness and a parish also of NE Sutherland. The village stands near the head of Sandside Bay, 10¾ miles WSW of Thurso, under which it has a post office, with money order, savings' bank, and telegraph departments. It consists of an inn, a school, the parish church, and a few houses. An older town, whose ruins were uncovered by a waterspout in 1751, is said to have been a burgh of regality, with two free fairs and a free port, granted by James VI. when he knighted Donald Mackay in 1616. This Donald Mackay was the first of the Lords Reay, an account of whom is given under Tongue. A market cross at the present village claims to have belonged to the traditionary burgh. Sandside Bay, measuring 6 furlongs across the entrance, and 5 thence to its inmost recess, is fringed with fine sandy links. A harbour was formed here nearly 50 years ago by Major Innes at a cost of over £3000.

The parish contains also the adjoining villages of Melvich and Portskerra, 6½ miles W of Reay; and, in the S, the station of Forsinard, 28½ miles SW of Thurso. It is bounded N by the North Sea, E by Thurso and Halkirk, SE by Thurso (detached) and Halkirk, SW by Kildonan, and W by Farr. Its utmost length, from N to S, is 19⅛ miles; its utmost breadth, from E to W, is 14⅞ miles; and its area is 184⅝ square miles or 118,169¼ acres, of which 46,326⅜ belong to Caithness and 71,842⅜ to Sutherland, whilst 2391½ are water, 442⅛ foreshore, and 34 tidal water. The bold and rocky sea-coast, which measures 15½ miles along all its ins and outs, is indented by the Bay of Bighouse (6×5 furl.) near Portskerra, by Sandside Bay, and by triangular Crosskirk Bay (2½×3 furl.) at the eastern boundary. It rises rapidly from the sea to 91 feet near Portskerra, 314 at Cnoc Geodh Stoir, 152 at Fresgoe or Sandside Head, and 172 at the Hill of Lybster. Caverns are not infrequent; and near Borrowston a turf-clad natural arch spans a tide-washed chasm, nearly 50 feet deep. The river Halladale, rising close to the southern boundary at an altitude of 1200 feet above sea-level, runs 22⅛ miles north-north-westward and northward to the Bay of Bighouse, and is fed by Dyke Water (running 8¾ miles north-north-eastward) and a number of lesser streams. Sandside, Reay, and Achvarasdal Burns flow northward to Sandside Bay; and Forss Water, issuing from Loch Shurrery (1¼ mile × 2½ furl.; 321 feet), winds 12½ miles northward, mainly along the eastern boundary, to Crosskirk Bay. Of sixty-eight other lakes and lakelets, the largest are Loch Calder (2⅜ miles × 7½ furl.; 205 feet), on the eastern border; Loch Cailam or Chaluim (5×4 furl.; 435 feet), on the south-eastern border; and Loch na Seilge (5×4 furl.; 398 feet), 5 miles SSW of Reay. The surface is hilly but hardly mountainous, chief elevations being Ben Ratha (795 feet) and Ben nam Bad Mhor (952) in the Caithness portion, Ben Ruadh (837) on the western border, Ben Griam Bheag (1903) on the southern border, and the Knockfin Heights (1442) at the meeting-point of Reay, Kildonan, and Halkirk parishes. The rocks on the seaboard are Devonian sandstone, paving flag, and limestone; whilst those of the hills include granite, syenite, gneiss, hornblende, and quartzite. The sandstone and limestone have been largely quarried; shell-marl has been dug in large quantities at Dounreay and Brawlbin; iron ore is found in various places; and a vein of lead ore occurs near Reay village, but not under conditions to encourage mining. A mineral spring at Helshetter claims to be little inferior to the Strathpeffer wells. The soil on the seaboard about Borrowston and Dounreay is clayey and very tenacious of moisture, around Sandside Bay is sandy, and in the low parts of Strath-Halladale is a dark earth mixed with silicious sand. Little more than 3000 acres is in tillage; and a very trivial aggregate is under wood. The fine sheep-farm of Bighouse, comprising most of the Sutherland division of the parish, belongs to the Duke of Sutherland; the Sandside estate to the Duke of Portland; and the estate of Dounreay, 16,464 acres in extent, to Sir R. C. Sinclair of Stevenston, Bart. The great improvements carried out on the last-named property since 1859, in the way of building, draining, fencing, road-making, etc., are fully described in *Trans. Highl. and Ag. Soc.* for 1866 and 1875. Antiquities are a rude but extensive fortification on Ben Freiceadain near Loch Shurrery; remains of several circular towers in Strath-Halladale; numerous Picts' houses; and a ruined pre-Reformation chapel, St Mary's, at Lybster—'one of the most remarkable and ancient churches in the north of Scotland.' Its nave measures 17 feet by 12, and its chancel is 10 feet square; whilst a door at the W end and another in the chancel have inclined jambs, and are less than 4 feet high (T. S. Muir's *Old Church Architecture*, 1861). Reay is in the presbytery of Caithness and the synod of Sutherland and Caithness; the living is worth £300. The parish church was built in 1739, and contains 432 sittings. Other places of worship are Shurrery mission chapel, Reay Free church, and Strath-Halladale Free Church mission chapel; and five public schools—Brubster, Dalhalvaig, Dounreay, Melvich, and Reay—with respective accommodation for 64, 72, 100, 150, and 143 children, had (1884) an average attendance of 22, 30, 38, 40, and 66, and grants of £42, 16s. 3d., £30, 10s., £37, 16s. 3d., £17, 6s. 8d., and £52, 16s. 11d. Valuation (1881) £10,421, (1885) £11,662, of which £8752, 8s. was for the Caithness division. Pop. (1801) 2406, (1831) 2881, (1861) 2476, (1871) 2331, (1881) 2191, of whom 1197 were in Caithness, and 1301 were Gaelic-speaking.—*Ord. Sur.*, shs. 115, 109, 1878.

Reay's Country, Lord. See Tongue.

Redcastle, an ancient but modernised mansion in Killearnan parish, Ross-shire, on the N shore of Beauly Firth, 3¾ miles E by S of Muir of Ord station, and 6⅜ (*viâ* Kessock Ferry) WNW of Inverness. It claims to be the oldest inhabited castle in Scotland, having been

built in 1179 by David, brother to William the Lyon; was visited by Queen Mary in 1562; and is now the seat of the Right Hon. Henry James Baillie (b. 1804; suc. 1866), Conservative M.P. for Inverness-shire 1840-68, who holds 6512 acres in Ross and Inverness shires, valued at £6276 per annum.—*Ord. Sur.*, sh. 83, 1881.

Redcastle, an ancient castellated structure on the coast of Inverkeilor parish, Forfarshire, at the S side of the influx of Lunan Water to Lunan Bay, 4½ miles SSW of Montrose. Said to have been built by William the Lyon, perhaps to prevent invasion by the Danes, and to have been a royal hunting-seat, it seems to have been a place of considerable strength; and is now a ruin, with thick compact walls and a strong surrounding rampart.—*Ord. Sur.*, sh. 57, 1868.

Redden, a farmhouse in Sprouston parish, Roxburghshire, near the right bank of the Tweed, within 1 mile of the English Border, and 4 miles NE of Kelso. Redden made some figure in feuds and negotiations connected with the old Border strife; and a neighbouring alluvial tract bears the name of Redden Haughs, and is notable for fertility.—*Ord. Sur.*, sh. 26, 1864.

Redding, a collier village, with a post office, in Polmont parish, Stirlingshire, 1½ mile W by N of Polmont Junction, and 2½ miles ESE of Falkirk. An extensive tract, called Redding Moor, to the SW, remained till 1830 in a state of commonage; and began then, under permission of its proprietor, the Duke of Hamilton, to be enclosed and cultivated by the colliers at their spare hours. Pop. (1861) 642, (1871) 599, (1881) 520.—*Ord. Sur.*, sh. 31, 1867.

Redford, a village in Carmyllie parish, Forfarshire, 7 miles WNW of Arbroath.

Redford, a village, with flax works, at the NW border of Dysart parish, Fife, on the left bank of the Ore, 2¾ miles W by S of Thornton Junction, and 3¾ N by W of Kirkcaldy.

Redford, a quaint old mansion in Colinton parish, Edinburghshire, in a pretty wooded dell on the left bank of Braid or Redford Burn, 5 furlongs E by S of Colinton village. The judge, Sir James Foulis, assumed from it the title of Lord Redford (1674); and it was the birthplace of John Allen (1771-1843), the political and historical writer. Redford now belongs to R. A. Macfie, Esq. of Dreghorn Castle.—*Ord. Sur.*, sh. 32, 1857. See John Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Redford House, a mansion in Muiravonside parish, Stirlingshire, near the left bank of the Avon, 4 miles SW of Linlithgow.

Redgorton, a parish of Perthshire, containing the village and station of Luncarty, 4 miles NNW of Perth, under which there is a post office of Redgorton. Containing also the villages of Bridgeton, Cromwell-Park, and Pitcairngreen, with part of Stanley, it comprises the three ancient parishes of Redgorton, Luncarty, and St Serffs, united some time prior to 1619, and consists of a main body and a detached north-western portion, the barony of Mullion. The main body is bounded NW and N by Auchtergaven, E by St Martins and Scone, S by Tibbermore, SW by Methven, and W by Methven and Moneydie. Its utmost length, from N to S, is 5⅞ miles; its breadth, increasing southward, varies between 4¼ furlongs and 3⅛ miles; and the area of the whole parish is 6168 acres, of which 160½ are water, and 1261 belong to the detached portion. This, bounded NE by Auchtergaven, and on all other sides by the Logiealmond section of Monzie, lies 12 miles NW of Perth, and 1⅝ mile NW of the nearest point of the main body. With a rudely triangular outline, it has an utmost length from WNW to ESE of 3⅜ miles and an utmost width of 7⅛ furlongs. The Tay, here a splendid salmon river, curves 4½ miles south-by-westward along all the eastern border of the main division; and the Almond, its affluent, winds 5¼ miles south-eastward and east-north-eastward along most of the Methven and all the Tibbermore boundary. Shochie Burn runs 1⅝ mile north-eastward, Ordie Burn 9 furlongs south-south-eastward—both mainly along the Moneydie boundary; and their united stream continues ½ mile south-eastward across the interior, and falls into the Tay near Luncarty. The gently undulating surface declines at the mouth of the Almond to less than 50 feet above sea-level, and thence rises westward to 335 feet near Cotterton, northward to 245 near Burnside. Around these higher grounds spreads one of those panoramas for which the county is famous—on the E, the palace and park and pleasant lands of Scone; on the SE, the fertile strath of the Tay, its majestic stream now seen amid openings of wood, and now hid by its bodyguard of forest; in the same direction, the bridge and city of Perth, and a semicircular sweep of the Sidlaw and Ochil Hills, cloven down at Kinnoull and Moncreiffe, and overlooked by the distant Lomonds of Fife. From a point not far below its source, Shochie Burn runs 3⅝ miles east-south-eastward along all the Auchtergaven boundary of the detached section, whose surface—part of the frontier Grampians—rises west-by-northward, from 580 to 1540 feet above sea-level. Loch Mullion was greatly reduced by draining in 1836, but is still of considerable depth. The rocks are variously metamorphic, Silurian, and Devonian, and include clay-slate, chlorite slate, greywacke, coarse conglomerate, grey sandstone, argillaceous red sandstone, rock marl, and thin veins of satin spar. The soil, in most parts light and fertile, is here and there a mixture of clay and black earth. About three-fourths of the entire area are in tillage; rather more than one-ninth is under wood; and the rest of the parish is pasture, roads, waste, etc. Vestiges of an ancient Caledonian camp at Pitcairn, the site of Bertha or old Perth, adjacent to the confluence of the Tay and the Almond, and the legendary battle of Luncarty, are all treated in separate articles. Robert Fraser, F.R.S. (1760-1831), an eminent statistical writer, was born in the old manse. Mr Maxtone-Graham of Cultoquhey and Redgorton is chief proprietor, 5 others holding each an annual value of £500 and upwards, and 3 of between £100 and £500. Giving off its northern portion to Stanley *q. s.* parish, and its detached section to Logiealmond *q. s.* parish, Redgorton is in the presbytery of Perth and the synod of Perth and Stirling; the living is worth £243. The parish church, 7 furlongs SSW of Luncarty station, was probably built about 1690, and was repaired in 1766. An addition was made to it in 1841; and the whole was most tastefully repaired and cleaned in 1871. The number of sittings is 450. The manse, one of the finest in the Church of Scotland, was built in 1866-67. There is a Free church of Pitcairngreen and a U.P. church of Pitcairn; and two public schools, Pitcairngreen and Redgorton, with respective accommodation for 84 and 111 children, had (1884) an average attendance of 51 and 77, and grants of £40, 10s. and £72, 9s. Valuation (1860) £8615, 11s., (1884) £9309, 5s. 11d. Pop. (1801) 2009, (1811) 2216, (1821) 1589, (1841) 1926, (1861) 1671, (1871) 1461, (1881) 1452, of whom 1100 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 48, 47, 1868-69.

Redhall, a mansion in Colinton parish, Edinburghshire, on the right bank of the Water of Leith, in the southern vicinity of Slateford, and 3¼ miles SW of the centre of Edinburgh. In 1650 the neighbouring castle of Redhall was besieged and all but demolished by Cromwell, who took prisoners the garrison, 60 in number, and stripped them naked. The estate, held successively by Cunninghams, Otterburns, Hamiltons, etc., was purchased in 1755 by George Inglis; and its present proprietor, John Inglis, Esq. (b. 1830; suc. 1847), holds 712 acres in the shire, valued at £1938 per annum.—*Ord. Sur.*, sh. 32, 1857.

Redhall Tower, a quondam baronial fortalice in Kirkpatrick-Fleming parish, Dumfriesshire, on the left bank of Kirtle Water, 3½ miles ESE of Ecclefechan. A seat of the family of Fleming, it sustained a close three days' siege by an English force towards the end of Baliol's reign, and was eventually set on fire, when the thirty men who formed its garrison chose rather to perish in

the flames than to surrender. It was entirely demolished about the beginning of last century.

Redhead. See INVERKEILOR.

Redhouse, a village in Kincardine parish, Perthshire, 2½ miles S of Doune.

Redhouse Castle. See ABERLADY.

Redkirk. See GRETNA.

Rednock, a modern mansion, with finely wooded policies, in Port of Monteith parish, Perthshire, 7 furlongs E by N of the Lake of Monteith, and 4¼ miles N of Port of Monteith station.

Redpath, a hamlet in Earlston parish, Berwickshire, on the left bank of Leader Water, 2 miles S of Earlston town.

Redrow, a village in Newton parish, Edinburghshire, ½ mile WNW of Millerhill station.

Redswire. See SOUTHDEAN.

Reekie Linn, a cataract of the river Isla, on the mutual border of Glenisla and Lintrathen parishes, W Forfarshire, 3¼ miles N of Alyth. The Isla, here traversing a gorge between cliffs 120 feet high, makes two falls of 60 and 20 feet; occasions a reverberation which echoes loudly up the flanking cliffs; and sends up from the abyss such clouds of spray as hang over it in almost perpetual smoke-like vapour. Fine masses of wood crown the cliffs; and a rustic tower, on the right side, commands a full view of the cataract.—*Ord. Sur.*, sh. 56, 1870.

Regland, Loch. See DALRY, Kirkcudbrightshire.

Reichip House, a mansion on the Duke of Athole's property, at the mutual border of Caputh and Clunie parishes, Perthshire, 6 miles NE of Dunkeld. The picturesque dell of Reichip abounds in some rare plants, and contains a well formerly held in superstitious veneration, with the site of a pre-Reformation chapel.—*Ord. Sur.*, sh. 56, 1870.

Reidswire. See SOUTHDEAN.

Reiss, a village in Wick parish, Caithness, near Sinclair Bay, 4 miles NNW of Wick town, under which it has a post office.

Relugas, a mansion in Edinkillie parish, Elginshire, on an eminence between the confluent Divie and Findhorn, 3½ miles NNW of Dunphail station, this being 8½ miles S by W of Forres, under which there is a post office of Relugas. Occupying a romantic site, and surrounded by pleasure-grounds of singular beauty, it is a picturesque, irregular edifice, in the cottage ornée style. Its oldest part bears date 1785, and a large addition was made about 1828. The estate belonged for two centuries to the Cumins, whose heiress, Miss Charles Anne Cumin, in 1808 married her third cousin, Sir Thomas Dick-Lauder, Bart. (1784-1848), author of the *Moray Floods*, etc. It was sold in 1847 to W. M'Killigin, Esq., and again in 1852 to G. R. Smith, Esq., whose daughter-in-law, Mrs Smith, holds 1034 acres in the shire, valued at £486 per annum.—*Ord. Sur.*, sh. 84, 1876.

Remilton, a village in Abdie parish, NW Fife, 7 furlongs ESE of Newburgh.

Rendall. See EVIE.

Renfield. See BLYTHSWOOD.

Renfrew (Br. *Rhyn*, 'a point of land,' and *frew*, 'the flowing of water'), a parish containing a town of the same name lying along and intersected by the Clyde in the NE of Renfrewshire and in the Upper Ward of that county. It is bounded N by Dumbartonshire, E by Lanarkshire, S by Abbey parish, Paisley, W by Kilbarchan, and SW by Inchinnan. On the N and E the parish and county boundaries coincide. Starting from the centre of the Clyde at the mouth of the Black Cart, the line passes up the centre of the former river till at Yoker Burn it strikes to the N, and follows the course of the burn for about 1 mile. It then strikes across to Yokermains Burn, and follows it up to beyond Scaterig, whence it turns southward and south-westward to the Clyde, which it reaches at the old position of Marline Ford. Crossing the Clyde the line continues near the E and S of the grounds of Elderslie House to Pudzeoch Burn, which it follows to Millburn Bridge, whence it follows the Mill Burn to the N end of the reservoir, and then proceeds irregularly to the corner of Hillington Wood. There it quits the county boundary and takes first a south-westerly direction to a point a little E of the 5-mile post on the Glasgow and Paisley joint railway, and afterwards a north-westerly direction to a point on the road midway between Newmains and Bogside. From this the course is up a small burn to Arkleston Print-Works, and then westward to a point on the White Cart, opposite the mouth of Abbotsburn, up which it proceeds by Wester Walkinshaw to the Black Cart, the centre of which it follows back to the Clyde. The greatest length, from the WNW at the junction of the Gryfe and the Black Cart to the ESE at Hillington Wood, is 4 miles; the greatest width, from the N at the mouth of the Black Cart to the S at Arkleston, is 2⅝ miles; and the area is 4488·488 acres, of which 18·557 are foreshore and 159·017 are water. The Clyde divides the parish into two unequal portions, about one-third of the whole area lying to the N of the river. In the northern section, which is the only part of Renfrewshire lying N of the Clyde, the ground is flat along the edge of the river, but thereafter rises rapidly to 50 and then to 100 feet, and reaches, towards the NE, in the grounds of Jordanhill House, an extreme height of 149 feet. On the S side of the Clyde the ground is flat, rising in the SW to only from 17 to 20 feet above sea-level; in the SE to from 28 to 30 feet; and in the extreme S, at Cockle and Knock Hills, to over 50, the latter (85 feet) being the highest point of the southern section. On the extreme S the parish includes a portion of the municipal and parliamentary burgh of Paisley. Both sections are well-wooded and highly cultivated, the soil being a rich and fertile alluvium, with a subsoil of sand or strong clay. The underlying rocks are carboniferous, and both coal and ironstone are worked. Some of the clays in the NE and elsewhere are extensively used in the manufacture of bricks, and several of them contain arctic and recent shells. The drainage is effected by the streams and rivers mentioned in describing the boundaries. The ground between the policies of Elderslie House on the SW and the river Clyde is known as the King's Inch, and was, down to the middle of the 17th century or later, an island—a narrow branch of the Clyde having struck off from the main river at Marline Ford and passed between it and the burgh. Somerled, Lord of the Isles, who had risen in rebellion against King Malcolm IV., was defeated and slain at Renfrew in 1164; and a mound with a stone on the top is noticed by Pennant as, traditionally, the memorial of the place of his defeat, but no trace of it now remains.

The parish of Renfrew is distinguished for its connection with the ancient house of Stewart, the lands of Renfrew being the first mentioned of the estates specified in the charter granted by King Malcolm IV. in 1157 in favour of Walter, 'son of Alan,' and confirming a grant previously made by King David I. The office of King's High Steward being also conferred on Walter and his descendants, they took thence the surname of Stewart, and so this corner of the land became the cradle of the illustrious race destined to ascend in succession the thrones of Scotland and England. Knock Hill on the S is still shown as the traditional spot where Marjory Bruce, wife of a succeeding Walter, High Steward of Scotland, was thrown from her horse and killed while hunting in 1316. She was far advanced in pregnancy at the time, and the Cæsarean operation was resorted to in order to save the life of the child, who afterwards became Robert II. The tradition adds that an injury caused to his eyes during the operation was the occasion of the affection that procured him his popular name of 'Bleary.' The spot was marked till somewhere between 1779 and 1782 by an octagonal pillar placed on an eight-sided base, and known, by some confusion of names, as Queen Bleary's Cross. The monument was then destroyed by a rustic vandal, who occupied the neighbouring farm, and who used the pillar as a door lintel, and the stones of the supporting steps to repair

a fence. Its site was to the ESE of Knock Farm, and a little farther to the ESE there was formerly a mound called Kempe Knowe. It was a circular mound of earth about 20 yards across, and surrounded by a moat about 5 yards wide, but no trace of it now remains. According to tradition it was constructed to be the place of contest between the last Sir John Ross of Hawkhead and a noted English wrestler, whose match the English king of the period had challenged the Scotch king to produce. Ross disabled his adversary in a way that procured him the name of 'Palm-mine-arms,' and was rewarded by the king with the lands and royal castle at 'the Inch;' and the older inhabitants always referred to his monument, which is placed in a burial vault constructed for it by the Earl of Glasgow on the SE of the new church, as 'Palm-mine-arms.' Semple, in his continuation of Crawfurd's *History*, mentions that an urn had been dug up at the Knock Hill in 1746, and another in 1782, so that in all probability the mound had been a barrow much older than Sir John Ross's time. The lower part of the hill is called the 'Butts,' and was probably the place where the burghers of Renfrew practised archery. At the side of the road from Renfrew to Inchinnan, near the bridge across the White and Black Carts, and within the policies of Blythswood House, is a large block of sandstone known as the Argyll Stone, and marking the spot where the Earl of Argyll was wounded and captured after the failure of his ill-conducted enterprise in 1685. After the dispersion of his forces in Dumbartonshire he crossed the river Clyde, and was attempting to make his escape in disguise when he was stopped by a party of militia who were guarding the ford where the bridge now stands. Some reddish veins in the stone, long pointed out as the stains made by his blood as he leant wounded against the rock, are no longer visible. Besides the burgh of Renfrew the parish also includes, on the N, the town of Yoker, and on the extreme NE the small mining village of Scaterig. The portion to the N of the Clyde is traversed by the road from Glasgow along the N bank of the river; while the high road from Glasgow to Greenock passes through the southern portion. A road from N to S passes from Paisley through the burgh of Renfrew to the Clyde, where a ferry, with large ferry boats for horses and carts, provides communication with the opposite side at Yoker. To the W of this road is a branch railway line from Paisley to Renfrew. The mansions are Blythswood, Elderslie, Jordanhill, Scotstoun, and Walkingshaw. Besides agriculture and the industries connected with the burgh, there are pits, brick and tile works, and a distillery at Yoker. Eleven landowners hold each an annual value of £500 and upwards, 19 hold each between £500 and £100, 41 hold each between £100 and £50, and there are a considerable number of smaller amount.

The parish is in the presbytery of Paisley and synod of Glasgow and Ayr, and the living is worth £648 a year. The churches are noticed in connection with the burgh. The landward school board has under its management the Oswald, Scotstoun, and Yoker schools; and these, with accommodation for 201, 120, and 150 pupils respectively, had in 1883 attendances of 160, 139, and 148, and grants of £126, 5s., £73, 18s., and £135, 6s. 6d. Valuation (1860) £20,902, (1884) £27,976, 18s. 1d., exclusive of the burgh and of £1896 for the railway. Pop. (1801) 2031, (1821) 2646, (1841) 3076, (1861) 4664, (1871) 5938, (1881) 7439, of whom 3859 were males and 3580 females, while 5115 were in the burgh.—*Ord. Sur.*, sh. 30, 1866.

Renfrew, a market town, port, and royal burgh, and the county town of Renfrewshire, is in the E of the parish just described, and close to the S bank of the river Clyde. It is by rail 3 miles N by E of Paisley, and 6 W of Glasgow. The burgh is of considerable antiquity, for in the charter granted by Walter, the High Steward, when he founded the Abbey of Paisley in 1160, it is spoken of as 'burgo meo de Reinfru' and 'oppidum meum de Reinfru,' so that it must even then have made some progress. The burgh, at first one of barony, became in the reign of Robert III. a royal burgh, having received a charter from that monarch in 1396, and subsequent confirmatory charters were granted by James VI. in 1575 and 1614—the former making an additional grant of all the religious houses and altarages connected with the burgh, and the latter making provision, among other things, for the better maintenance of the grammar school; and again by Queen Anne in 1703. The burgh and district gave in 1404 the title of Baron Renfrew to the heir apparent to the Scottish throne, and the connection of the place with 'the ancient Stewart line' is still maintained by the retention of the title among those borne by the Prince of Wales. At the date of the charter of 1614 the burgh seems to have been the principal port on the Clyde, and as is mentioned in the article on Paisley, it had some bitter struggles with that place at earlier dates as to its privileges of trade. Its old prosperity has now, however, suffered decline, and it has been completely eclipsed by its younger and more vigorous rivals, though why it is a little hard to say. Probably when the pinch came it relied more on the dignity of its long descent and ancient origin than on its energy. The town now consists of a main body—the original town—about ½ mile distant from the present channel of the Clyde, and a more modern extension reaching down to the Clyde itself. From the Cross near the centre of the main body of the town High Street passes to the E along the road to Glasgow, with Queen Street branching off it, while Fulbar Street continues the line to the W. Southward, along the Paisley Road, is Hairst Street; and northward are Canal Street and Ferry Road, with Orchard Street branching off to the westward. The older buildings have for the most part a humble and very unpretending appearance, but the outskirts have many villas and cottages. The old town was washed along the N by the old channel of the Clyde, which cut off the King's Inch, as noticed in the last article; but this has long been closed up, though a portion of its course is occupied by the harbour at the mouth of Pudzeoch Burn and the course connecting that with the Clyde. These were constructed originally about 1785, and a stone wharf added in 1835 at a cost of about £800. During the year 1884 fresh operations were undertaken at a cost of £3000 for the purpose of giving greater accommodation and affording increased facility in loading and unloading vessels. After the improvements are completed the depth will be 6 feet at low water, and 16 feet at high water of ordinary spring tides, while in the former case the water area will be 1·169 acre, and in the latter 1·862 acre. Along the Clyde is a wharf, which is a place of call for steamers. The original castle of the Stewards probably stood on the Inch, but their later one was on a slightly elevated piece of ground on the W side of the road leading from the town to the ferry, and although all trace of the building has long been gone the site is still called Castlehill, and traces of the fosse remained till about 1775. Adjacent lands are known as the Orchard, the King's Meadow, and the Dog Row, and the Castlehill and Orchard are excluded from the burgh royalty, though they are almost in its centre. The foundation of the Abbey of Paisley seems to have been preceded by the establishment of a number of monks at Renfrew, as in one of the grants to the Benedictines of Paisley mention is made of 'molendinum de Renfru et terram ubi monachi prius habitaverunt;' but whether the buildings they occupied were on the Inch or near Mill Burn House has been a matter of dispute.

Public Buildings, etc.—The old town-hall, with its diminutive spire, was built in 1670, and remained on the W side of the Cross till 1871, when it was removed, and a new town-hall erected in 1871-73 at a cost of £7500. The original structure was partially destroyed by fire on 6 March 1878, but was immediately after renovated. The style is a somewhat mixed French Gothic, and at the E end is a massive square tower, rising to a height of 105 feet, with corbelled turrets and ornamented cresting and finials. The design is

RENFREW SHIRE.
British Miles.
Longitude West from Greenwich
Loch Long
Gare Loch
Holy Loch
Firth of Clyde
Dumbarton
Greenock
Port Glasgow
Gourock
Cardross
Kilpatrick
Great Canal
Clyde Bank
Dunglass Ca
Kilmalcolm
Houston
Kilbarchan
Johnstone
Lochwinnoch
Neilston
Beith
Eaglesham
Paisley
Renfrew
Partick
River Clyde
GLASGOW
Inverkip
Wemyss Bay
Largs
Rotten Burn
Kilmalcolm Moss
Castle Semple Loch
Glasgow, Paisley & Johnstone Canal
Glasgow & Ayr Railway
Caledonian Railway
Ardmore
Ardgowan
Lunderston
Dunoon
Gantocks
Cloch Ho
Gourock Ho
Cartsdyke
Fresh Green
Parkhill
Barrochan
Houston
Duchal
Pomillon
Craigbet
Tannahill
Castle Semple
Barr Loch
Mearns
Auchenlodment
Auchenbothie
Auchenlodment Moss
Locher W.
Muirshiels
Barnagh
Burnfoot Hill
Tannahill
Crosslet
Bownield
Hartfield
Barrmill
Barrhead
Fullhead
Arthurly
Killoch
Dunterlie
Thornliebank
Shilmuir
Eastwood
Pollokshaws
Pollokshields
Govan
Mosspark
Camphill
Abbotsinch
Blackstone
Moorland
Tradeston
Hillhead
Partick
Scotstoun
Jordanhill
Whiteinch
Yoker
Clydebank
Duntocher
Old Kilpatrick
Bowling
Milton
Erskine
Bonhill
Renton
Alexandria
Jamestown
Levenbank
Balloch
Loch Lomond
Loch Long
Gare Loch
Holy Loch
Firth of Clyde
Firth of Lorn
Firth of Forth
Firth of Clyde

poor, and some of the ornamentation very tawdry. The buildings contain a public hall with accommodation for 800 persons, a council chamber measuring 39 feet by 24, business offices, and a police office and cells. The Athenæum, with a public library, dates from 1853. The parish church, to the S of High Street, was erected in 1861, and is an excellent building in the Early English style, with an aisle to the SE over the burial place of the family of Ross of Hillhead, now represented by Lord Glasgow, and containing the old effigy of Sir John Ross, commonly known as Palm-mine-arms. It replaced a very old church which had been repaired till it would repair no longer. There is a good spire about 130 feet high. The Free church, NW of the town-hall, which was built immediately after the Disruption, was replaced in 1882-83 by a new plain Gothic building on the same site. It has a squat square tower with pinnacles. The U.P. church, in Hairst Place, is a plain Gothic building with a corner turret. The Roman Catholic church (St James), erected in 1877, has 250 sittings. The Blythswood Testimonial, to the W, is a classic building, erected by subscription in 1842 in honour of Mr Campbell of Blythswood. Used as the burgh grammar school, it was vested in the town council on condition of their maintaining it as a school and contributing £100 a year to its support; and in 1873 was, under the Education Act, handed over to the burgh school board. There was a grammar school from an early date, and under the charter of 1614 revenues derived from the old chapelries and altarages were specially set aside for its better support. The Blythswood Testimonial, Lady A. Speirs, Manse Street Infant, and Mrs Campbell's and St James' (R.C.) schools, with respective accommodation for 514, 70, 76, 112, and 152 pupils, had (1884) attendances of 416, 92, 79, 112, and 103, and grants of £389, 8s., £50, 2s. 9d., £52, 4s., £98, and £70, 9s.

Municipality, etc.—The old royalty of the burgh was very extensive, covering an area of nearly 5 square miles, but the boundaries of the municipal and parliamentary burgh are much more confined. The latter line starts from the Clyde and passes up Pudzeoch Burn to Mill Burn Bridge, thence in a straight line S, taking in part of Govan parish, to the Mill Burn about ⅛ mile farther up. From this it strikes straight north-westward to a point on the road near Longcroft Cottage, and then N by E straight back to the Clyde. Municipal affairs are managed by a provost, 2 bailies, a dean of guild, a treasurer, and 7 councillors; and the corporation property is, considering the size of the burgh, large and valuable, comprising farms, pasture land, house property, the ferry across the Clyde, and the harbour dues. The annual value, which was £1448 in 1833, is now nearly £5000. Extensive rights of salmon fishing in the Clyde belong to the town, but they have long ceased to be exercised in consequence of the changed condition of the river, and a yearly sum of upwards of £200 is paid to the town by the Clyde Trustees as compensation. The town council acts as the police commission, and has under its charge a force of 5 men and a superintendent (one to every 917 of the population), the latter with a salary of £120 a year. The number of persons tried at the instance of the police in 1883 was 399; the number of those convicted, 369; the number who forfeited pledges, 253; and the number not dealt with, 43. There is a gas company with works to the N of the burgh. The burgh arms are a vessel with the sun over the prow and the moon over the stern, with two crosses, one fore and another aft. At the top of the mast of the ship is a flag with a St Andrew's cross, and from the yard hang two shields, one bearing a lion rampant and the other the arms of the Stewarts; motto, *Deus gubernat navem.* The Prince and Princess of Wales were here in 1876, and the Duke of Albany in 1875 and 1882. The industries are connected with two shipbuilding yards, a chemical work, a forge, a dyework, and weaving.

Seal of Renfrew.

The town has a post office, with money order, savings' bank, and telegraph departments, under Paisley, an office of the Union Bank, and agencies of 10 insurance companies. A burgh court is held every Monday; and quarter sessions meet here on the first Tuesday of March, May, and August, and the last Tuesday of October. The weekly market is on Saturday; and cattle fairs are held on the third Tuesday of May and the last Friday of June. Renfrew unites with Rutherglen, Dumbarton, Port-Glasgow, and KILMARNOCK in sending a member to parliament. Parliamentary constituency (1885) 772, municipal constituency, 898. Valuation (1874) £9417, (1885) £13,884. Pop. of parliamentary burgh (1841) 2013, (1861) 3228, (1871) 4163, (1881) 4825, of whom 2472 were males and 2353 females. Houses (1881) 989 inhabited, 126 uninhabited, 8 building. In 1881 the population of the royal burgh was 5115, and of the municipal burgh 5502.

Renfrewshire, anciently Strathgryfe, is a maritime county on the W coast of Scotland. Although only twenty-seventh among the Scottish counties as regards area, its industrial importance is so great that it ranks sixth in the order of valuation and fifth in the order of population, while it contests with Edinburgh the distinction of being the most densely populated county in Scotland, each of them having 1075 inhabitants to the square mile. The county is bounded N by the river Clyde and Dumbartonshire, NE, about Glasgow, and E by Lanarkshire, SSW by the Cunningham district of Ayrshire, and W by the Firth of Clyde. The shape is an irregular oblong. The greatest length, from Cloch Point on the NW to near Laird's Seat on the SE, is 30½ miles; the greatest breadth near the centre, from the grounds of Erskine House on the Clyde on the N to a point on Dubbs Burn near Beith Station on the SSW, is 13 miles; and the area is 253·793 square miles, or 162,427·958 acres, of which 2021·179 are foreshore and 3621·342 water. Of the land area of 156,785·437 acres, nearly two-thirds is cultivated, there being 95,353 acres in 1884 under crop, bare fallow, and grass, while 5424 were under wood, the rest being occupied by buildings and roads, etc., or by rough hill grazings and waste ground.

Commencing at the NW corner at Kempock Point the boundary line follows the river Clyde for 17¾ miles to the mouth of Yoker Burn, up which it passes, following it nearly to its source. Thereafter it strikes across to Yokermains Burn, which it follows up till beyond Scaterig, whence it returns by the E side of Jordanhill and Scotstoun House grounds to the Clyde at the old line of the Marline Ford. Crossing the river it proceeds by an old channel of the Clyde along the western and south-western boundaries of the parish of GOVAN to the line of railway now occupying the old course of the Glasgow and Paisley Canal. It passes thence northeastward by Ibroxhill and the W side of Pollokshields, and entering Glasgow crosses Kinning Park to the E of Lambhill Street, turns eastward for a short distance along Paisley Road, again northwards between Main Street and Rutland Crescent and along Rutland Place, Greenlaw Place, and Kinning Place, till, nearly opposite Pollock Street, it passes northward to the Clyde, which it reaches close to Hyde Park Ferry. Leaving the river 150 yards farther up about the centre of Springfield Quay, the line follows a very involved and zig-zag course through Kingston, up the centre of the gas-works, along the E side of East Pollokshields, to the N of Strathbungo, between Govanhill and Crosshill, and to the N of Polmadie House, where it reaches Polmadie Burn. It passes up the Burn to the junction of Malls Mire Burn and West Burn, whence it follows the course of

the former to its source. From this it bends southward and eastward to the White Cart, and follows the course of that stream for 5½ miles to the junction with Threepland Burn, which it follows for ¼ mile, and then winds southward and south-westward to a point midway between Quarry Hill and Muir Hill. Here it turns to the WSW in a very winding course, always near but seldom actually on the line of watershed between the streams that flow south-westward to the Garnock, Annick, and Irvine, and so to the Firth of Clyde; and those that flow north-eastward to the Gryfe, Black and White Carts, and so to the river Clyde. The line is therefore mostly artificial, but to the E of Beith station it follows the course of Roebank Burn, and to the W of the station the courses of Dubbs Burn and Maich Water, and passing between Misty Law Moor and Ladyland Moor, reaches the watershed at Misty Law (1663 feet). It follows the watershed by East Girt Hill (1673 feet) and Hill of Stake (1711), to the E shoulder of Burnt Hill (1572), whence it takes the line of Calder Water for 1½ mile, crosses to the upper waters of the North Rotten Burn, follows this down to about ½ mile from Loch Thom, and then striking across to Kelly Dam follows Kelly Water down to the pier at Wemyss Bay. From this back northward to Kempock Point, the Firth of Clyde is again the boundary.

Districts and Surface, etc.—The county is divided into an Upper and a Lower Ward, the former with Paisley, and the latter with Greenock, as the chief town. The surface varies considerably, but may be considered as falling into three divisions—hilly, gently rising, and flat. The first lies along the southern border, and extends to the centre on the SE and along the W. It comprises most of the parishes of Eaglesham and Mearns, great part of the parishes of Neilston and Lochwinnoch, and most of the parishes of Kilmalcolm, Port Glasgow, Greenock, and Innerkip, and reaches an altitude of 1093 feet in Eaglesham, 871 in Mearns, 900 in Neilston, 1711 in Lochwinnoch, 1446 in Kilmalcolm, 661 in Port Glasgow, 995 in Greenock, and 936 in Innerkip. It is generally a somewhat bleak moorland, but some of the heights command good and extensive views. The gently rising district which lies immediately to the N of the hilly one commences at the boundary with Lanarkshire on the E, and extends WNW to the neighbourhood of Langbank and Kilmalcolm. It comprehends the parishes of Cathcart and Eastwood, and parts of the parishes of Neilston, Paisley, Renfrew, and Inchinnan, Kilbarchan, Houston, and Erskine. Many of the heights are well wooded, and the scenery is picturesque. The flat district, known locally as the 'laich lands,' lies along the N border, forming a level tract by the side of the Clyde, and extending along the narrow flat valley of the Black Cart and Castle Semple Loch. It extends from the eastern boundary of Renfrew parish to the Erskine Hills, and thence south-westward as already indicated, comprehending most of the parish of Renfrew, and parts of the parishes of Paisley, Inchinnan, Houston, Erskine, Kilbarchan, and Lochwinnoch. It appears to have been, at a comparatively recent geological period, covered by the waters of the inlet noticed in the article on GLASGOW. The physical characteristics of the small portion of the county to the N of the Clyde have been already noticed in the article on the parish of Renfrew.

The drainage is carried off by the White Cart, the Black Cart, and the Gryfe, all of which unite and flow into the Clyde 1 mile NW of Renfrew Ferry, and by the Clyde itself. The courses of these rivers are separately described, and it remains here merely to notice the drainage basins. The whole of the eastern and south-eastern portions of the county are drained by the White Cart and the streams flowing into it, of which the principal are, beginning at the SE corner, Threepland Burn, Ardoch and Holchall Burns, Earn Water, Newfield Burn, Brock Burn, Levern Water, and Cowden Burn, and some smaller streams in the neighbourhood of Paisley. A small district in the centre is drained by the Black Cart, the river Calder, Patrick Water, and the other burns flowing into it, none of which are of any great size or importance. The western part of the county is drained by the Gryfe and its tributaries, of which the chief are, from the source downwards, North Rotten Burn, Green Water, Burnbank Water, Blacketty Water, Mill Burn, Gotter Water, Locher Water, all on the S side, and Barochan and Dargavel Burns on the N. Besides these a number of smaller streams, of which the chief are Dubbs Burn and Maich Water, flow into the Ayrshire drainage basin, and others again in the W and N flow direct to the Clyde. Of the latter the chief are Kelty Burn, entering the Firth of Clyde at Wemyss Bay; the Kipp, which enters at Innerkip; and Shaw's Water at Greenock. In the SE in the basin of the White Cart, there are a number of lochs, of which the most important are Loch Goin or Blackwoodhill Dam (8 × 3 furl.), on the border of the county, and which, through Loch Burn and Craufurdland Water, is one of the main sources of Irvine Water; Dunwan Dam (5 × 2 furl.), the source of Holchall Burn; some small lochs SW of Eaglesham, Binend Loch (4 × 2 furl.), and Black Loch on the head-streams of the Earn; Brother Loch (3 × 3 furl.), on Capelrig or Thornliebank Burn; Glen Reservoir (3 × 1½ furl.) and Balgray Reservoir (5 × 3 furl.), on the course of Brook Burn; Glanderston Dam, Walton Dam, and Harelaw Dam (5 × 2 furl.), Long Loch (8 × 2 furl.), from which issues one of the head-streams of Annick Water (Ayrshire); a small loch a mile WNW of Barrhead, and Stanley and Glenburn Reservoirs S of Paisley. Between the basins of the White and Black Carts is the small but picturesque Loch Libo, whence flows the Lugton (Ayrshire). In the basin of the Black Cart are Broadfield Dam, on a tributary of Patrick Water, and Castle Semple Loch (12 × 3 furl.), from which flows the Black Cart itself. At its upper end is the area formerly occupied by Barr Loch (8 × 4 furl.), which is now drained. On Calder Water are Calder Dam and Queenside Loch. In the valley of the Gryfe there are two small lochs near Bridge of Weir, and at the source are the Gryfe Reservoir and the Compensation Reservoir (together 12 × 2 furl.), connected with the Greenock waterworks; and immediately to the W of these is Loch Thom (12 × 3 furl.). The fishing in most of the lochs and streams where the water is not poisoned by industrial operations, is fair.

Geology.—The geology of Renfrewshire claims special attention, on account of the remarkable development of volcanic rocks belonging to the Lower Carboniferous period, and the important series of coal-fields situated to the N of the volcanic area between Houston and the E border of the county at Rutherglen.

The various subdivisions of the Carboniferous system are represented within the limits of the county. Beginning with the red sandstones lying at the base of this formation, which are the oldest strata in Renfrewshire, they occupy a belt of ground along the coast in the neighbourhood of Innerkip. They are merely the prolongation towards the N of similar red sandstones fringing the Ayrshire coast between Ardrossan and Largs. Consisting mainly of red sandstones and cornstones with bands of breccia and conglomerate, there is little variety in the character of the strata. They stretch inland, from the shores of the Firth of Clyde at Innerkip to the hills near Loch Thom, where they are thrown into a gentle anticlinal fold, succeeded by the overlying Cement-stone series, of which, however, there is but a limited development. Throughout Renfrewshire the Cement-stone series is almost wholly represented by a prodigious succession of contemporaneous volcanic rocks, which are the continuation of the great volcanic belt on the N side of the Clyde, forming the Kilpatrick Hills. There can be little doubt of the precise geological position of these volcanic rocks in this county, because, to the W of Loch Thom, they rest conformably on the white sandstones and Cement-stones, and where no faults intervene they graduate upwards into the Carboniferous Limestone series. They form a belt of hilly ground stretching across the county in a NW and SE direction, from the hills S of Greenock,

by the Gleniffer Braes, to the high grounds round Eaglesham. In the E portion, the volcanic rocks form a low anticlinal arch, the axis of which coincides generally with the trend of the chain, the overlying strata being inclined towards the SW and NE. Throughout this extensive area the igneous rocks consist of basalts, melaphyres, and porphyrites, with intercalations of tuffs and coarse volcanic breccias. The upper and under surfaces of the lava flows are extremely slaggy and scoriaceous, and the cavities are filled with agates and various zeolites. The discharge of lavas and tuffs was so persistent that there are but few traces of sedimentary deposits in the volcanic series. In the neighbourhood of Eaglesham, however, sandstones, dark shales, and sometimes impure fossiliferous limestones are associated with the tuffs. An interesting feature connected with this remarkable volcanic area is the existence of numerous vents, from which the igneous materials were discharged. They are now filled with basalt, porphyrite, or volcanic agglomerate. The best example of one of these ancient cones is to be found on the hills between Queenside Muir and Misty Law, where there is a great development of coarse agglomerate pierced by dykes and bosses of felstone and basalt. This agglomerate pierces the stratified volcanic rocks of the district.

As already indicated, there is a perfect passage from the contemporaneous volcanic rocks into the overlying Carboniferous Limestone series. The junction between the two, however, is usually a faulted one, and hence the regular succession is visible only at few localities. Where no faults intervene, the strata immediately overlying the ancient lavas consist of ashy sandstones, grits, and conglomerates, which are replaced at intervals by white sandstones and clay ironstones. Occasionally they are associated with bands of tuff. From the ashy character of the strata one might infer that the sedimentary materials were mainly derived from the denudation of the underlying volcanic rocks, while the bands of tuff indicate spasmodic outbursts of volcanic activity. The ashy strata just described are succeeded by the lowest members of the Carboniferous Limestone series. In Renfrewshire this important series of strata is divisible into three groups, in common with other areas in the midland counties, viz., a lower limestone group, a middle coal-bearing group, and an upper limestone group.

Along the N border of the volcanic area, between the White Cart Water at Busby and the banks of the Clyde near Erskine House, the members of the Carboniferous Limestone series are everywhere brought into contact with the ancient lavas and ashes by faults. A glance at the Geological Survey maps (sheets 30 and 22 of the 1-inch map of Scotland) shows the irregular nature of the boundary line due to the peculiar system of faulting. In one remarkable case the Carboniferous Limestone series stretches almost continuously across the volcanic belt, from Johnstone and Howwood to Lochwinnoch. This hollow is flanked by two powerful faults, throwing down the lowest members of the overlying series.

If we except some small patches of Millstone Grit to the E of Barrhead and near Pollokshields, and the limited development of the true Coal-measures on the border of the county at Rutherglen, the whole of the area lying to the N of the volcanic rocks belongs to the Carboniferous Limestone series. The strata are traversed by numerous faults which repeat the valuable seams of coal and ironstone. In the neighbourhood of Johnstone and Linwood they are arranged generally in the form of a synclinal fold. Along the W margin of this basin, near Bridge of Weir, we find the Hurlet Coal and Limestone dipping to the E and SE being rapidly followed by the Lillies Oil-Shale, the Hosie Limestone, and the Johnstone Clayband Ironstone. In the neighbourhood of Linwood the deepest part of the basin is reached, the Lower Garscadden Clayband Ironstone being succeeded by various coal seams belonging to the middle coal-bearing group. To the S of Johnstone there is a remarkable development of intrusive sheets of basalt occurring near the base of the Carboniferous Limestone series. The largest of these masses occurs in the neighbourhood of Quarrelton, measuring 1½ mile from N to S, and consisting of dolerite. It is underlaid by the thick Quarrelton Coal, which rests on a basement of volcanic tuff reposing on white sandstones intervening between the Quarrelton Coal and the volcanic rocks of the Cement-stone group. Near Howwood, the intrusive sheet just referred to, and the associated strata, form an anticlinal arch, from which the Hurlet Coal and Limestone dip away towards the E and W. Similar intrusive sheets of basalt rock occur about 1 mile to the NE of Paisley, where they occupy a similar geological horizon.

Passing E to that portion of the basin extending from Hurlet to Shawlands and Crossmyloof, there is a splendid development of the middle coal-bearing and upper limestone groups. A traverse from Hurlet E to Cowglen shows, if we exclude minor faults, a general ascending section from the outcrop of the Hurlet Coal and Limestone, through the Lillies Oil-Shale, Hosie Limestone, and the various ironstones and coals of the middle coal-bearing group, to the Cowglen Limestone. The latter bed forms the base of the upper limestone group, thus occupying a similar position with the Index Limestone in the Lanarkshire basin. The valuable coals and ironstones of the middle group also occur to the N of Shawlands and Crossmyloof, where they are abruptly truncated by a fault throwing down to the NE the Millstone Grit and the Coal-measures. Near Crossmyloof the coal seams of the middle group of the Carboniferous Limestone series are actually brought into conjunction with the numerous coals and ironstones of the true Coal-measures.

Advancing S from Crossmyloof, where the coal seams of the middle group have a general dip to the S, there is a general ascending series through the upper limestone group to the overlying Millstone Grit. The observer crosses in succession the Cowglen or Index Limestone, the white Giffnock sandstones, the Orchard Limestone, which is underlaid by a thin seam of coal; while at the top he finds the Arden Limestone, also underlaid by a seam of coal. In this district the Arden Limestone is regarded as marking the boundary between the Carboniferous Limestone series and the overlying Millstone Grit. The limestones of the upper group are by no means very fossiliferous, but there is a bed of shale at Orchard teeming with fossils which has become famous among the geologists of the west of Scotland. From this band alone Messrs Young and Armstrong have chronicled upwards of 120 species of univalve and bivalve shells, together with Foraminifera and Entomostraca.

To the E of Barrhead there is a small outlier of thick yellow sandstones, representing the Millstone Grit, resting on the Arden Limestone which rises from underneath the sandstones on every side save the E, where the basin is truncated by a NE and SW fault. Another little outlier of Millstone Grit resting on the Arden Limestone occurs about a mile to the SE of Thornliebank. Sandstones of the same age also occur at Pollokshields on the E side of the great fault already referred to, where they pass conformably below the true Coal-measures, forming the W termination of the great Lanarkshire basin. A line drawn from the county boundary near Dellevine House, NW by Crossmyloof to Ibroxholm, marks the course of the great fault which brings the Coal-measures into conjunction with the Carboniferous Limestone series. In this part of the basin the Kiltongue, Virtuewell, Splint, Hump, Rough Main, Rough Ell, and the Mossdale coal seams are represented.

Throughout the county there are numerous basalt dykes of Tertiary age, piercing alike the Lower Carboniferous volcanic rocks and the Carboniferous Limestone series. Perhaps the best examples occur in the volcanic area to the NW of Lochwinnoch, where some of the dykes run parallel with each other for a distance of several miles.

The proofs of glaciation in the county are abundant. Numerous instances of striations are met with, especially

in the volcanic area between Lochwinnoch and Port Glasgow. Throughout that district the general trend of the ice-markings is SE, due to the movement of the great ice sheet radiating from the Highland mountains. This SE trend continues as far as Kilbarchan and Lochwinnoch, but to the E of these localities the striæ gradually swing round to the SW. This change in the direction of the ice movement has been adequately explained by Professor James Geikie, who contends that during the great extension of the ice the glaciers from the Highland mountains moved in an E direction along the valley of the Clyde till they coalesced with those radiating from the Southern Uplands. Eventually the combined ice sheets moved in a SW direction across the volcanic chain in the E of Renfrewshire towards the Firth of Clyde. The glacial deposits which are splendidly developed in the county, and especially along the basin of the Clyde, will be described in the general article on the geology of Scotland.

Economic Minerals.—Copper ore occurs in grey sandstone near Gourock, and several copper mines have been worked in the volcanic rocks near Lochwinnoch, one of which has only recently been discontinued. Agates occur in great abundance in the amygdaloidal volcanic rocks. The various ironstones and coal seams already enumerated, both in the true Coal-measures and in the coal-bearing group of the Carboniferous Limestone, have been extensively wrought. The Arden Limestone has been largely quarried near Barrhead and Thornliebank, where it reaches a thickness of about 10 feet. The Orchard Limestone, though comparatively thin, has been highly prized as a cement limestone, owing to the valuable feature which it possesses of 'setting' under water. Alum has been largely manufactured from the shale at Hurlet and at the Nitshill chemical works; copperas is obtained from the iron pyrites in the shale. As already indicated the great Oil-shale series of Midlothian is represented in this county by contemporaneous volcanic rocks, but there is a band of oil shale underneath the Hosie Limestone at various localities between Houston and the E border of the county. The volcanic rocks supply excellent road metal; and the Giffnock sandstones, as well as some of the beds of limestone, supply excellent building material. *See Geological Survey Maps* (1 *inch*) *of Scotland, sheets* 22 *and* 30, *and the explanation to sheet* 22.

Soils and Agriculture.—The soil of the hill districts is principally a light earth, overlying gravel or disintegrated volcanic rock, and is in some parts covered with excellent pasture, and elsewhere with heath or deep moss. The soil of the gently rising district, though in some places thin and poor, is mostly a fairly good earth, overlying gravel or stiff clay, and passing in the haughs along streams into a good deep loam. Along the flat district the soil is a rich alluvium, varying in depth from a few inches to several feet, and in many places displaying all the excellences of rich carse land. The processes of husbandry differ in no respect from those employed in the neighbouring counties, and already noticed. Westerly and south-westerly winds prevail on an average for two-thirds of the year, and as they come directly from the Atlantic, they are loaded with vapour, and the result of their contact with the colder land is heavy rains. The western part of the county is, indeed, one of the wettest parts of the W coast of the Scottish mainland, the annual rainfall being about 60 inches. The mean temperature is about 48 degrees.

The areas under the various crops at different dates are given in the following tables:—

Grain Crops.—Acres.

Year.	Wheat.	Barley or Bere.	Oats.	Total.
1854	4495	513	16,392	21,400
1866	2973	234	14,229	17,436
1874	3346	259	13,645	17,250
1884	2229	178	14,132	16,539

Grass, Root Crops, etc.—Acres.

Year.	Hay and Grass in Rotation.	Permanent Pasture.	Turnips.	Potatoes.
1854	42,563	....	3334	5534
1868	17,133	41,287	2734	5006
1874	18,484	45,558	2485	4289
1884	22,997	47,880	2332	4351

while there are about 1300 acres annually under beans, rye, vetches, fallow, etc. The figures for 1854, as is so often the case with the returns for that year, seem unduly high. The acres under sown crop, exclusive of hay and grass, amount as given in that year to 30,268; but in 1866, the number was only 26,297; in 1874, 25,261; and in 1884, 24,185; but the whole area under crop, including hay and grass, and permanent pasture, has risen from about 90,000 acres in 1874, to 95,353 in 1884. The yield of the different crops is about average. The agricultural live stock in the county at different periods is shown in the following table:—

Year.	Cattle.	Horses.	Sheep.	Pigs.	Total.
1854	23,513	3623	25,850	1808	54,794
1868	23,415	..	32,307	1583	..
1874	26,248	2941	39,724	1888	70,801
1884	27,548	3331	31,582	1952	64,413

The falling off in the area under crop, and the increase in that appropriated for grazing purposes, since 1854, is probably entirely due to the large towns in the neighbourhood, which afford a ready market for stock and for dairy produce. In 1881, there were in the county 20 holdings under 15 acres, 79 between 15 and 50, 216 between 50 and 100, 307 between 100 and 500, and 20 over 500. According to *Miscellaneous Statistics of the United Kingdom* (1879), 155,321 acres, with a total gross estimated rental of £990,898, are divided among 5735 proprietors, one holding 24,951 acres (rental £14,801), two together 27,775 (£27,059), one 6500 (£5562), thirteen 44,625 (£65,977), eight 12,128 (£28,963), seven 4793 (£17,972), ninety 19,651 (£174,018), etc. Excluding the villa residences in the neighbourhood of the large towns, the principal mansions are Ardgowan, Arthurlie House, Upper Arthurlie House, Auchneagh House, Barochan House, Barshaw House, Bishopton House, Blackstone House, Blythswood House, Broadfield House, Broom House, Capelrig House, Carruth House, Castle Semple, Castle Wemyss, Cathcart House, Craigends House, Crookston House, Cumnock House, Dargavel House, Duchall House, Eaglesham House, Eastbank House, Eastwoodpark House, Elderslie House, Erskine House, Ferguslie House, Finlayston House, Garthland, Glentyan House, Gourock House, Gryfe Castle, Hazelden House, Hawkhead, Househill, Houston House, Johnstone Castle, Jordanhill House, Kirkton House, Kelly House, Langhouse, Leven House, Linn House, Lochside House, Merchiston House, Milliken House, Muirshiels House, North Barr House, South Barr House, Park House, Pollok Castle, Pollok House, Ralston, Scotstoun House, Southfield House, and Walkinshaw House.

Industries, Communications, etc.—The industries of Renfrewshire are more extensive and diversified than those of any other county in Scotland, except Lanarkshire, and with those of the latter county they are, indeed, very intimately connected. Weaving, at one time the staple everywhere, is still extensively carried on, as well as the cognate trades of bleaching and dyeing. From 1740 to 1828, the principal fabrics were linens, but since then cotton has obtained the upper hand. Large numbers of the population are also engaged in the working of minerals, the manufacture of chemicals, the refining of sugar, the making of machinery, foundry-work, shipbuilding, and rope making, and for more minute details in connection with all the industries, reference may be made to Glasgow, Greenock, Paisley, Port Glasgow, Renfrew, and

several of the parishes. At Greenock and Port Glasgow the commerce is also important.

The county is intersected by a number of main lines of road, all starting at Glasgow. Of these, the first passes westward through Govan and Renfrew, along the S bank of the Clyde to Greenock, and round the coast until it enters Ayrshire. A second strikes WSW by Kinning Park and Ibrox to Paisley, and, passing up the valley of the Black Cart, enters Ayrshire near Beith. The third and fourth pass to the W of the Queen's Park [see Glasgow] and separate at Shawlands, one branch leading by Pollokshaws and Barrhead down the valley of Lugton Water to Irvine, while the other passes also to Irvine by Newton Mearns and Stewarton through the valley of Annick Water. The main line of road from Hamilton to Kilmarnock passes through the SE corner of the county by Eaglesham, and there is an important road from Paisley by Johnstone, Kilbarchan, and Kilmalcolm to Greenock, which is joined at Kilmalcolm by another road from Lochwinnoch. There are also a large number of cross and district roads. Railway communication is provided by both the Caledonian and Glasgow and South-Western railways. Of the former, one of the lines leaves Glasgow on the SW, and follows the line of the road by Barrhead and Neilston into Ayrshire, and on to Kilmarnock, while the other passes westward and then NW and W by Bishopton and Port Glasgow to Greenock and Wemyss Bay. A branch leaves the first-mentioned line near Pollokshaws, and passes SE by Busby into Lanarkshire. The Glasgow and South-Western line to Paisley is the same as that of the Caledonian as far as Paisley, but it then strikes south-westward along the valley of the Black Cart into Ayrshire. At Johnstone a branch goes off by Bridge of Weir and Kilmalcolm to Greenock, and a short branch strikes off E of Paisley for Renfrew. The bed of the old Glasgow and Paisley Canal has now also been converted into a railway.

The royal burgh is Renfrew; the parliamentary burghs are Paisley, Greenock, and Port Glasgow. The police burghs are Crosshill, Kinning Park, Pollokshields, East Pollokshields, Pollokshaws, Gourock, and Johnstone. Places of over 2000 inhabitants are, Barrhead, Busby, Kilbarchan, and Thornliebank; villages and places with populations between 100 and 2000 are Anniesland, Blackstoun, Bishopton, Bridge of Weir, Cathcart, Clarkston, Clippens, Crofthead, Crossmyloof, Crosslee, Eaglesham, Elderslie, Gateside, Houston, Howood, Hurlet, Inkerman, Innerkip, Kilmalcolm, Langside, Linwood, Langbank, Lochwinnoch, Mount Florida, Neilston, Newton, Newton-Mearns, New Cathcart, Nitshill, Scotstoun, Shawlands, Strathbungo, Thorn and Overton, Wemyss Bay and Yoker.

The county has 15 entire *quoad civilia* parishes and portions of other four. These, with reference to the wards, are:—Upper Ward—Abbey Paisley, Kilbarchan, Houston, Erskine, Inchinnan, Renfrew, Neilston, part of Dunlop, part of Beith, Lochwinnoch, Eastwood, Mearns, Eaglesham, part of Cathcart, and part of Govan. Lower Ward—Innerkip, Greenock, Port Glasgow, and Kilmalcolm. The divisions of Paisley (4) and Greenock (3) and the *quoad sacra* parishes of Barrhead, Linwood, those connected with Cathcart, Pollokshaws, those connected with Gourock, Langbank, and Newark, are also included. All the parishes in the Lower Ward and Erskine are in the presbytery of Greenock and synod of Glasgow and Ayr; and all the others—with the exception of Cathcart and Eaglesham, which are in the presbytery of Glasgow—are in the presbytery of Paisley in the same synod. Including mission churches, there are 48 places of worship in connection with the Established Church, 40 in connection with the Free Church, 34 in connection with the United Presbyterian Church, 1 in connection with the United Original Seceders, 4 in connection with the Congregational Church, 3 in connection with the Evangelical Union, 4 in connection with the Baptist Church, 6 in connection with the Episcopal Church, and 12 in connection with the Roman Catholic Church. In the year ending September 1883 there were in the county 117 schools, of which 97 were public, with accommodation for 42,265 children. These had 39,233 on the rolls, and an average attendance of 29,349. The staff consisted of 346 certificated, 70 assistant, and 251 pupil teachers. The parliamentary constituency for 1883-84 was 7036. The county is governed by a lord-lieutenant, a vice-lieutenant, 23 deputy-lieutenants, and 250 justices of the peace. The sheriff-principal is shared with Bute, and there is a sheriff-substitute for each ward. The sheriff court for the Upper Ward is held at Paisley every Tuesday and Thursday during session, and for the Lower Ward at Greenock every Wednesday and Friday. Sheriff small debt courts are held weekly at Paisley on Thursday, and at Greenock weekly on Wednesday. Justice of peace small debt courts are held at Paisley every Friday, at Greenock every Thursday, at Port Glasgow on the first Monday of every month, at Pollokshaws on the first Tuesday of every month, at Barrhead on the first Monday of each month, at Johnstone on the third Monday of each month, and at Lochwinnoch on the first Saturday of each month; while quarter sessions are held at Renfrew on the first Tuesday of March, May, and August, and the last Tuesday of October. The police force, exclusive of the burghs of Greenock, Johnstone, Paisley, Port Glasgow, and Renfrew, which have separate forces, consists of 89 men (1 to every 1172 of the population), under a chief constable, with a salary of £300 a year. In 1883 the number of persons tried at the instance of the police was 1967; convicted, 1877; committed for trial, 241; not dealt with, 111; forfeited pledges, 613; whilst 1726 besides were tried at justice of peace courts, including the burgh courts of Kinning Park and Crosshill. Of the total convictions 537 were within the burgh of Kinning Park. In 1883 the average number of registered poor was 2897, with 1833 dependants, and 130 casual poor with 140 dependants, while the total expenditure for parochial board purposes amounted to £47,587. All the parishes are assessed, and there are poorhouses at Govan and Paisley. The proportion of illegitimate births averages about 6 per cent., and the average death-rate is about 20. Connected with the county is the 4th battalion of the Princess Louise's Argyll and Sutherland Highlanders (formerly the Royal Renfrew Militia), with headquarters at Paisley; a battalion of artillery volunteers, with headquarters at Greenock; and three battalions of rifle volunteers, with their headquarters at Greenock, Paisley, and Pollokshaws. The county returns one member to serve in parliament; one is returned for Greenock, another for Paisley; and Port Glasgow and Renfrew have a share in a third. Valuation, inclusive of railways, but exclusive of burghs (1674) £5764, (1815) £265,534, (1843) £474,568, (1876) £583,741, (1884) £781,195. Pop. of registration county, which takes in part of Cathcart parish from Lanarkshire, and gives off parts of Beith and Dunlop to Ayrshire, and parts of Gorbals and Govan to Lanarkshire (1831) 132,812, (1841) 154,160, (1851) 157,950, (1861) 168,746, (1871) 195,305, (1881) 225,611; civil county, (1801) 78,501, (1811) 93,172, (1821) 112,175, (1831) 133,443, (1841) 155,072, (1851) 161,091, (1861) 177,561, (1871) 216,947, (1881) 263,374, of whom 126,743 were males and 136,631 were females. These were distributed into 54,622 families, occupying 52,703 houses with 145,568 rooms, an average of 1·81 persons to each room. Of the 263,374 inhabitants 3319 males and 1371 females were connected with the civil or military services or professions, 1141 men and 7623 women were domestic servants, 9958 men and 294 women were connected with commerce, 3572 men and 934 women were connected with agriculture and fishing, and 49,681 men and 21,734 women were engaged in industrial handicrafts or were dealers in manufactured substances, while there were 39,345 boys and 38,900 girls of school age. Of those engaged in industrial handicrafts 7741 men and 15,547 women were connected with the manufacture of textile fabrics, and 7986 men and 172 women were connected with the working of mineral substances. Of those connected with farming

and fishing 3284 men and 920 women were connected with farming alone, and 813 farmers employed 865 men, 393 women, 118 boys, and 290 girls.

History.—The territory now forming Renfrewshire belonged to the ancient Caledonian Damnii, and afterwards formed part of the kingdom of Strathclyde. [See DUMBARTON.] The western portion bore the name of Strathgryfe, and was by that title granted to Walter, the first High Steward of Scotland, by David I. Prior to 1404 it seems to have been included in the county of Lanark, but to have then become a separate county when King Robert III. granted to his son and heir James this barony and the other portions of his ancient patrimonial inheritance. Since that time the eldest son of the reigning monarch has, besides his other titles, been styled Prince and Steward of Scotland and Baron of Renfrew. When their is no heir-apparent these titles are merged in the Crown. Traces of Roman remains and of the Roman occupation are noticed under PAISLEY. The county is associated with the defeat and death of Somerled, Lord of the Isles, in 1164, when we are told by the Chronicler of Melrose, that after landing at Renfrew, that prince was overtaken by Divine vengeance, 'and was there slain with his son and an immense number of his followers by a few of the people of the surrounding district.' In a very curious Latin poem printed in the appendix to Dr Skene's edition of Fordun (1871), the 'honour and praise' of the victory is given to the exertions of St Kentigern in return for devastations which Somerled had committed in the Glasgow district several years before, and which the bishop of Glasgow had prayed very hard that the Saint might piously rebuke. During one of the many fruitless invasions of Scotland in the early years of Edward II., the English army in 1310 penetrated as far as Renfrewshire before returning. In 1489 the county was the scene of operations carried on by James IV. against some of the nobles that had adhered to his father's party, and in 1565 the Earl of Moray and the discontented barons assembled at Paisley, but marched into Lanarkshire almost immediately. Other historical events and antiquities will be found noticed particularly under the various parishes and places with which they are more immediately connected. Like most of the Scottish counties, Renfrewshire was seriously troubled with witches in the 17th century, and the case of the 'Witches of Renfrew' in 1697 became very famous. The person bewitched was Christian Shaw, a girl of eleven years of age, daughter of John Shaw, laird of Bargarran, who, 'having had a quarrel with one of the maid-servants, pretended to be bewitched by her, and forthwith began, according to the common practice in such cases, to vomit all manner of trash; to be blind and deaf on occasion; to fall into convulsions; and to talk a world of nonsense, which the hearers received as the quintessence of afflicted piety. By degrees a great many persons were implicated in the guilt of the maid-servant, and no less than twenty were condemned, and five suffered death on the Gallow Green of Paisley, while one strangled himself in prison, or, as report went, was strangled by the devil, lest he should make a confession to the detriment of the service.'

See also Crawfurd's *Description of the Shire of Renfrew* (1710), with continuations by Semple (Paisley, 1782) and by Robertson (Paisley, 1818); Wilson's *General View of the Agriculture of Renfrewshire* (1812); Hamilton of Wishaw's *Description of the Sheriffdom of Lanark and Renfrew* (Maitland Club, 1831); Ramsay's *Views in Renfrewshire* (1839); Hector's *Selections from the Judicial Records of Renfrewshire* (1876-78); the works cited under PAISLEY, and for the witches *Narrative of the Sufferings and Relief of a Young Girl in the West* (Edinb. 1698); *Saducismus Debellatus* (London, 1698); *A History of the Witches of Renfrewshire* (Paisley, 1809; and a new edition 1877); and an attack on the executions, *Witchcraft Proven, Arraign'd, and Condemn'd* (Glasgow, 1697).—*Ord. Sur.*, shs. 29, 30, 31, 22, 1865-73.

Rennyhill, an estate, with a mansion, in Kilrenny parish, Fife, 1½ mile NNE of Anstruther.

Renton, a town and a *quoad sacra* parish in Cardross parish, Dumbartonshire. The town, standing on the right bank of the river Leven, has a station on the Vale of Leven railway, 1¼ mile S of Alexandria, and 2¼ miles N by W of Dumbarton. It was founded in 1782 by Mrs Smollett of Bonhill, and named in honour of her daughter-in-law, one of the Rentons of Lammerton; grew and flourished in connection with the special industries of the Vale of Leven; has charming environs, enriched with the parks of Strathleven and Bonhill; carries on extensive industry in calico-printing, bleaching, and dyeing establishments; and has a post office with money order, savings' bank, and telegraph departments, a *quoad sacra* parochial church, three Free churches (one of them Gaelic, and one Reformed Presbyterian till 1876), a public school, a public hall (1882), etc. The novelist, Tobias Smollett (1721-71), was born in the old house of Dalquhurn; and at Renton, within ½ mile of his birthplace, his cousin erected a monument to his memory in 1774. It is a round Tuscan column, 60 feet high, springing from a square base; and it bears a long Latin inscription by Prof. Geo. Stuart of Edinburgh, John Ramsay of Ochtertyre, and Dr Samuel Johnson. The *quoad sacra* parish, constituted in 1870, is in the presbytery of Dumbarton and the synod of Glasgow and Ayr; the minister's stipend is £120. Its church, which was built as a chapel of ease at a cost of £700, underwent great improvements in 1869. Pop. of *q. s.* parish (1881) 4387; of town (1831) 1860, (1841) 2472, (1861) 2891, (1871) 3087, (1881) 4319, of whom 2414 were females. Houses (1881) 813 inhabited, 5 vacant.—*Ord. Sur.*, sh. 30, 1866.

Rentonhall, an estate, with a mansion, in Morham parish, Haddingtonshire, 2¾ miles SE of Haddington.

Renton House, a mansion in the W of Coldingham parish, Berwickshire, near the left bank of Eye Water, 1¼ mile ESE of Grant's House station. Its owner, Miss Stirling (suc. 1861), holds 2674 acres in the shire, valued at £2987 per annum.—*Ord. Sur.*, sh. 34, 1864.

Repentance, Tower of. See HODDAM.

Rerigonium. See BEREGONIUM and INNERMESSAN.

Rerrick or **Rerwick**, a coast parish of S Kirkcudbrightshire, containing the villages of DUNDRENNAN and AUCHENCAIRN, 5 miles ESE and 10 E by N of Kirkcudbright. Its ancient name was Dundrennan; and letters are still received by the minister, addressed Dundrennan, Old Abbey, and Monkland. It is bounded NW and N by Kelton, E by Buittle, SE and S by the Solway Firth, and W by Kirkcudbright. Its utmost length, from N to S, is 7¼ miles; its utmost breadth, from E to W, is 6¾ miles; and its area is 21,724¾ acres, of which 1692¾ are foreshore. The coast, extending from Balcary Point, at the western side of the mouth of Auchencairn Bay, 9 miles west-south-westward to the mouth of Dunrod Burn, is mostly bold and iron-bound, and exhibits a series of abrupt headlands, 100 to 352 feet high, slightly intersected by the baylets of Rascarrel, Barlocco, Orroland, Portmary, Burnfoot, and Mullock. It abounds in craigs, fissures, tortuous ravines, and other features of romantic scenery; is believed to have contributed much of its landscape to Sir Walter Scott's descriptions of coast scenery in *Guy Mannering;* and commands, from nearly all its summits and salient points, very brilliant views, both inland and towards the sea. The Balcary lifeboat was launched, 18 Dec. 1884. The interior is variously champaign, undulated, rolling, and hilly; declines to vale and plain in the E, around and above Auchencairn Bay; contains vales or hollows in the centre, formerly mossy or otherwise waste, but now charmingly luxuriant; and is nearly filled throughout the N, to the extent of about one-fourth of its entire area, by hills that almost attain the dignity of mountains. Chief elevations, from S to N, are Walls Hill (352 feet), Brown Hill (515), a nameless summit to the NE of the parish church (535), the Heughs of Airds (335), Newlaw Hill (595), Suie Hill (790), Bentuther Hill (900), and Bengairn or BENCAIRN (1280). The drainage, with slight exception, is all carried southward

or south-south-eastward by indigenous brooks, chiefly Troudale, Collin, Rascarrel, Henmuir, and Abbey Burns. Granitic rocks prevail in the uplands, and Devonian rocks on the low grounds and the coast. Sandstone, of excellent quality for building, is found on the coast; iron and copper ore have been mined in considerable quantities; barytes mines were worked extensively at Barlocco some years ago; jasper of fine quality occurs in coves of the coast; and rock-crystal, of a pale purple colour and of perfect prismatic form, abounds in a burn on Screel Hill. The soil in most parts is naturally wet and spongy, but has been worked by draining and cultivation into a good fertile mould. Nearly two-thirds of the entire area have been subjected to the plough, about 550 acres are under wood, and the rest of the parish is either pastoral or waste. The chief antiquities are a great barrow on the summit of Bengairn, remains of two Caledonian stone circles, vestiges of twelve camps, variously Roman, Danish, and Saxon, and the ruins of DUNDRENNAN Abbey. Mansions, noticed separately, are AUCHENCAIRN House, BALCARY, COLLIN, HAZLEFIELD, NETHERLAW, ORCHARDTON, and PORTMARY; and 8 proprietors hold each an annual value of £500 and upwards, 14 of between £100 and £500. In the presbytery of Kirkcudbright and the synod of Galloway, this parish is divided ecclesiastically into Rerrick proper and AUCHENCAIRN *quoad sacra* parish, the former a living worth £434 (22 chalders, with £8, 6s. 8d. for communion elements). Part of the old parish church of Rerrick may still be seen, 9 furlongs SE of Dundrennan village; and a stone of it bears the inscription—'This Church, originally a Chapel, was enlarged in 1743, taken down in 1865.' The present parish church, in the centre of Dundrennan village, is a Gothic edifice of 1865-66, with a beautiful rose window, a tower and spire 68 feet high, and about 400 sittings. Two public schools, Auchencairn and Dundrennan, with respective accommodation for 260 and 190 children, had (1884) an average attendance of 151 and 92, and grants of £158, 19s. 6d. and £95, 7s. Valuation (1860) £12,603, (1884) £19,230. Pop. (1801) 1166, (1831) 1635, (1861) 1738, (1871) 1911, (1881) 1807, of whom 770 were in Rerrick ecclesiastical parish.—*Ord. Sur.*, sh. 5, 1857.

Resart, Loch, a sea-loch at the mutual border of Uig parish, Ross-shire, and Harris parish, Inverness-shire, on the W side of Lewis, in the Outer Hebrides. Opening from the W, and penetrating 7¼ miles eastward, it measures 2 miles across the entrance, and contracts gradually to a point. Scarp island protects its entrance; and a salmon-stream of its own name flows 5 miles northward to its head from Harris.

Rescobie, a parish of central Forfarshire, whose church stands on the northern shore of Rescobie Loch, 7 furlongs E by N of CLOCKSBRIGGS station, this being 2½ miles ENE of the post-town, Forfar. It is bounded N by Oathlaw, Aberlemno, and Guthrie; E by Kirkden; S by Kirkden, Dunnichen, and Forfar; and W by Kirriemuir. Its utmost length, from WNW to ESE, is 7¾ miles; its breadth varies between 5 furlongs and 2⅞ miles; and its area is 6724 acres, of which 165 are water. Rescobie Loch, 2 to 20 feet deep, and lying at an altitude of 196 feet above sea-level, extends 1¼ mile east-south-eastward, and varies in width from 200 to 550 yards. LUNAN WATER, issuing from its foot, flows 2⅜ miles east-south-eastward along the Aberlemno and Guthrie boundary, and early in this course expands into Balgavies Loch (4 × 1⅛ furl.). From the shores of Rescobie Loch the surface rises southward to Dunnichen Hill (764 feet) on the Dunnichen boundary, and northward to Turin Hill (814) on the Aberlemno boundary. The face of the latter eminence presents a mural range of rock not unlike that of the Salisbury Craigs at Edinburgh; and its summit commands a very extensive and brilliant view of both land and sea. Devonian rocks, mainly grey paving-stone and Old Red sandstone conglomerate, are predominant; display, in some places, curious interstratification; and have long been worked in large quarries of remarkable appearance. The soil is much of it a dark brown loam, with good 'body,' but elsewhere is thin and moorish, sharp and gravelly, or clayey; and sometimes varies much within one and the same field. Nearly one-eleventh of the entire area is under wood; rather more than one-tenth is in permanent pasture; and nearly all the rest of the land is in tillage. In 1099 Donald Ban, the 'usurper,' taken prisoner and blinded by Eadgar, his nephew, was condemned to perpetual imprisonment at Roscolpin or Rescobie, where he died. There were formerly two fortalices of considerable importance, called the castles of Rescobie and Weems, but they have entirely disappeared. An ancient stronghold on the summit of Turin Hill is believed to have been one of the oldest stone forts in Scotland. It comprised a circular citadel of 685 square yards in area, and an extensive range of contiguous buildings. Parts of the citadel still remain, with walls 13 or 14 feet thick; and they popularly bear the name of Kemp or Camp Castle. Mansions are Burnside, Carse-Gray, Ochterlony, Pitscandly, and Reswallie; and 5 proprietors hold each an annual value of more, 3 of less, than £500. Rescobie is in the presbytery of Forfar and the synod of Angus and Mearns; the living is worth £327. The parish church was built in 1820, and contains 560 sittings. The public school with accommodation for 62 children, had (1884) an average attendance of 32, and a grant of £35, 15s. Valuation (1857) £6579, (1885) £8465, 7s., *plus* £1841 for railway. Pop. (1801) 870, (1831) 808, (1861) 747, (1871) 748, (1881) 685.—*Ord. Sur.*, sh. 57, 1868.

Resolis. See KIRKMICHAEL, Ross-shire.

Resort, Loch. See RESART.

Restalrig, a decayed village in South Leith parish, Edinburghshire, in the northern vicinity of Jock's Lodge, and north-eastern vicinity of St Margaret's railway depôt, 2 miles E by N of the General Post Office, Edinburgh. In pre-Reformation days, Restalrig was the capital of the parish in which it stands, and the site of the parish church. According to tradition, St Triduana, a noble virgin of Achaia, who came to Scotland in the 8th century in company with St Rule, died at Restalrig; and down to Sir David Lyndsay's time many pilgrims, afflicted with eye-diseases, resorted hither to Sanct Tredwall's shrine. At the death of William the Lyon (1214), the district of Restalrig—or, as it was anciently called, Lestalric—was possessed by the De Lestalric family. In 1291 Adam of St Edmund's, parson of Lestalric, obtained a writ to the sheriff of Edinburgh to deliver him his lands and rights; and, in 1296, in the ancient church here, he swore fealty to Edward I. During the reign of Robert Bruce, or the early part of the 14th century, the barony passed by marriage into the possession of the Logans, with whom it continued till they incurred forfeiture for participation in the Gowrie Conspiracy. In 1435 the patronage of the church was confirmed to Thomas Logan, by William, Bishop of St Andrews. A collegiate establishment, dedicated to the Holy Trinity, the Virgin, and St Margaret, was established at Restalrig by James III. in 1487, enlarged by James IV. in 1512, and completed by James V. in 1515, the foundation comprising a dean, 9 prebendaries, 3 chaplains, and 2 singing boys. The parsonage, however, remained entire till the Reformation. In 1560 the first General Assembly ordained that the church, 'as a monument of idolatrie, be raysit, and utterlie casten downe and destroyed;' and that the parishioners should in future adopt as their parish church, St Mary's chapel in LEITH. In 1609 the legal rights of the church and parish of Restalrig, with all their revenues and pertinents, were formerly alienated from them by parliament, and conferred upon that chapel, then legally declared to be the parish church of South Leith. Robert Logan of Restalrig, the Gowrie conspirator, who died a bankrupt in 1606, had sold in 1596 his estate of Nether Gogar to Andrew Logan of Coalfield, in 1602 his lands of FAST CASTLE to Archibald Douglas, and in 1604 his barony of Restalrig to Lord Balmerino. The Lords BALMERINO held the lands of Restalrig till their forfeiture in 1746; and during the whole period of their possession appro-

priated the vaults of the forsaken and dilapidated church as the burying-place of themselves and their kinsfolk. Lady Balmerino, the wife of Arthur, the sixth and attainted Lord, resided in the village during the years of her widowhood, and died there in 1765. The Earls of Moray, who purchased the forfeited lands, now claim as their mausoleum an octagonal chapter-house to the S of the church, whose groined roof springs from a single central pillar, and which is said to have been built about 1435 by Sir Robert Logan. The Episcopalians have always, from the Revolution downward, had a strong attachment to Restalrig. They were for years prohibited from performing their funeral service in any of the city or suburban burying-grounds; so they adopted Restalrig as their cemetery, and here in 1720 interred the body of Alexander Rose, the last legal or more than titular bishop of Edinburgh. Here, too, is the grave of Lord Brougham's father, as well as of many a gallant soldier. The Second Pointed, three-bayed choir consisted of little more than the E wall and part of the side walls in 1836, when it was restored from designs by Mr W. Burn, and made a chapel of ease or mission chapel, subordinate to South Leith church. Under the verge of St Margaret's depôt was a famous spring, called St Margaret's Well; and some fine old Gothic stone-work over this was removed in 1860 to a runnel at the N foot of Salisbury Craigs. Restalrig House, to the N of the village, is a plain substantial mansion, in a well-wooded park of 15 acres. It was built in 1815-17, and enlarged a few years afterwards. The ancient mansion on the barony was a castellated structure, opposite the W end of the church, and is now represented by the lower walls of a plain modern house in the village.—*Ord. Sur.*, sh. 32, 1857.

Rest-and-be-Thankful. See CORSTORPHINE and GLENCROE.

Restennet, an ancient parish of central Forfarshire, now forming the northern district of Forfar parish, which hence is legally known as Forfar-Restennet. A sheet of water, called Restennet Loch, on the Rescobie boundary, was drained at great expense, in the latter part of last century, for the sake of obtaining a rich supply of shell-marl in its bed. A peninsula, projecting into the lake from a very narrow isthmus, rose into an eminence, which was crowned by a priory, 1½ mile ENE of Forfar. At Restennet St Bonifacius is said to have baptized the Pictish king, Nectan, in 710, and to have dedicated a church to St Peter (see ROSEMARKIE); and on the site of this church David I. founded an Augustinian priory, which Malcolm IV. made a cell of the Abbey of Jedburgh. The roofless priory church, repaired during 1863-66, is First Pointed in style, and has a NW broach spire 70 feet high. It served as the parish church of Forfar till 1591, and was afterwards the burying-place of the families of Dempster and Hunter. Traces remain, too, of a cloister-garth 60 feet square.—*Ord. Sur.*, sh. 57, 1868.

Reston, a village in Coldingham parish, Berwickshire, near the right bank of Eye Water, with a station on the North British railway at the junction of the Berwickshire branch, 8¾ miles NE of Duns, 11¼ NW of Berwick, and 46½ ESE of Edinburgh. It has a post and telegraph office under Ayton, an inn, a market cross, a public school, and a Free church (1880; 260 sittings), erected at a cost of £1150. Pop. (1881) 321.—*Ord. Sur.*, sh. 34, 1864.

Reswallie, an estate, with a mansion, in Rescobie parish, Forfarshire, 3 miles ENE of Forfar.

Rhea. See KYLE-RHEA.

Rhiconich, an inn in Eddrachillis parish, W Sutherland, at the head of salt-water Loch Inchard, 41½ miles NW of Lairg.

Rhind. See RHYND.

Rhinns (Gael. *roinn*, 'a point or promontory'), a peninsula in the SW of Islay island, Argyllshire, extending between the German Ocean and Loch Indal, communicating with the main body of the island by an isthmus, between the head of Loch Gruinnard and the upper part of Loch Indal, and terminating in a headland called Rhinns Point. Its length, south-westward, is 17 miles; and its greatest breadth is 7 miles. Its terminating point is not a headland proper, but the islet ORSAY.

Rhinns, the western one of the three districts of Wigtownshire. Known to the Romans as Chersonesus Novantum, it takes its present name, like the Rhinns of Islay, from the Celtic *roinn*, 'a point or promontory;' and it forms a double peninsula, washed on the W side by the Irish Channel, and on most of the E side by Loch Ryan and Luce Bay. With the rest of the county it is connected by an isthmus, 5⅞ miles wide at the narrowest, between the head of Loch Ryan and the head of Luce Bay; and it measures 28¼ miles in length from N by W to S by E, 5½ miles in extreme breadth, and about 120 square miles in area. It begins on the N at Corsewall Point, and terminates at the S in the Mull of Galloway, each of them crowned by a lighthouse; it attains a maximum altitude of 593 feet in CAIRNPAT, and mostly consists of lowland, which, at a comparatively recent geological period, was clearly under marine water; and probably, after becoming dry, it was for some time an island or a series of islands. The parishes comprised within it are Kirkcolm, Leswalt, Portpatrick, and Kirkmaiden, most of Stoneykirk, and a small part of Inch.—*Ord. Sur.*, shs. 7, 3, 1, 1856-63.

Rhives, a modern mansion in Kilmuir-Easter parish, Ross-shire, 7 furlongs N of Delny station. Its late owner, George Ross, Esq. of Pitcalnie (1803-84), held 10,618 acres in the shire, valued at £1270 per annum.—*Ord. Sur.*, sh. 94, 1878.

Rhonehouse. See KELTON HILL.

Rhu-Stoer or **Point of Stoer,** a bold rocky headland in Assynt parish, Sutherland, terminating the peninsula in the extreme W of the parish, and presenting to the sea, 9¼ miles NW of Lochinver village, a detached mass of sandstone, rising to the height of 530 feet. A stack, or insulated towering sea-rock, confronting it, rises to a height of about 250 feet, and has such a curious outline as to seem at a distance like a large ship under studding sails.—*Ord. Sur.*, sh. 107, 1881.

Rhu-Vaal or **Rudha Mhail,** a headland at the northern extremity of Islay island, Argyllshire, flanking the W side of the northern entrance to the Sound of Islay, 7 miles N by W of Port Askaig. A lighthouse, erected on it in 1859 at a cost of £7437, shows a fixed red light in a westerly direction, between the bearings of about SSW ½ W and about E by S, and a white light in every other direction, both visible at the distance of 17 nautical miles.

Rhymer's Glen and **Tower.** See HUNTLY, Roxburghshire; and EARLSTON.

Rhynd (Gael. *roinn*, 'point' or 'peninsula'), a Perthshire parish, whose church stands 3⅞ miles NE of Bridge of Earn, and 4¼ SE of Perth, under which there is a post office of Rhynd. It is bounded NW by Kinfauns, NE by Kinfauns, the Inchyra section of Kinnoull, and St Madoes, S by Abernethy and Dunbarny, and W by Perth. Its utmost length, from WNW to ESE, is 4 miles; its utmost breadth is 1⅜ mile; and its area is 2893 acres, of which 175½ are foreshore and 260¾ water. The TAY, here 1 to 3 furlongs broad, curves 4½ miles north-eastward and south-eastward along all the boundary with Kinfauns, Kinnoull, and St Madoes; and Sleepless Inch and Balhepburn Island belong to Rhynd. The river EARN winds 3⅞ miles east-by-northward to the Tay along all the Abernethy border, though the point where it first touches the parish and that where it enters the Tay are only 1¾ mile distant as the crow flies. E of Fingask the surface is low and flat, at no point 50 feet above sea-level; but westward it rises to a maximum altitude of 725 feet on the summit of wooded MONCREIFFE Hill at the meeting-point of Rhynd, Perth, and Dunbarny parishes. Moncreiffe Hill mainly consists of greenstone; but elsewhere the principal rock is Old Red sandstone. The soil in the NW is sharp and gravelly, in the SE is chiefly clay, intermixed here and there with very fine black loam. About 100 acres are under wood; and nearly all the rest of the parish is in a state of high cultivation. At Grange of Elcho, near the western border, David Lindsay of Glenesk founded,

some time in the 13th century, a Cistercian nunnery, where, in 1346, the Earl of Ross assassinated Reginald of the Isles. Elcho Castle, noticed separately, is the chief antiquity; and the Earl of Wemyss is chief proprietor, 1 other holding an annual value of more, and 2 of less, than £500. Rhynd is in the presbytery of Perth and the synod of Perth and Stirling; the living is worth £350. In the early part of the 12th century and on to the Reformation the parish was a dependency of the monastery of St Adrian, Isle of May; and a stone in the E gable of the old church marks the grave of one of the priors. The original church has entirely disappeared, but probably stood on the site of a wretched church, dating from the time of the Reformation, and inconveniently situated 2 miles to the SE of the present church, which was built in 1842. The public school, with accommodation for 96 children, had (1884) an average attendance of 60, and a grant of £68, 18s. Valuation (1865) £7700, 3s. 3d., (1884) £6176, 10s. 9d. Pop. (1801) 403, (1841) 402, (1861) 297, (1871) 327, (1881) 297.—*Ord. Sur.*, sh. 48, 1868.

Rhynie, a parish on the western border of Aberdeenshire, in the SE containing the post-office village of Muir of Rhynie, 4 miles SSW of Gartly station and 13¾ NW of Alford. It comprises the ancient parishes of Rhynie and Essie; and is bounded N by Gartly, E by Kennethmont, SE by Clatt and Auchindoir, and W by Cabrach. Its utmost length, from E to W, is 7½ miles; its breadth varies between 1⅝ and 4⅞ miles; and its area is 20⅛ square miles or 12,883⅝ acres, of which 4½ are water. The drainage all goes to the little Water of Bogie, which flows 6¼ miles north-north-eastward along all the south-eastern and eastern boundary. Where it quits the parish, the surface declines to 524 feet above sea-level; and thence it rises to 1500 feet at the Hill of Noth, 1851 at the Tap o' Noth, 1059 at Quarry Hill, 1398 at Clayshot Hill, and 1669 at the Mound of Haddoch, just within Cabrach parish. The rocks include granite, sandstone, greenstone, and syenite; and the soil is a loamy clay along the valley of the Bogie, clay and gravel towards the Tap o' Noth, and loamy or mossy over most of the western division. Antiquities, other than Lesmore Castle, are cairns, tumuli, several standing-stones (four of them sculptured, and very good of their kind), and remains of a large vitrified fort on the Tap o' Noth, with walls more than 10 feet thick. The Duke of Richmond and Gordon is almost sole proprietor. Rhynie is in the presbytery of Strathbogie and the synod of Moray; the living is worth £205. The parish church, a Free church, and a Congregational chapel, all stand at Muir of Rhynie; and Lesmore public, Rhynie public, and Duff's girls' schools, with respective accommodation for 58, 240, and 42 children, had (1884) an average attendance of 40, 136, and 39, and grants of £32, £113, 5s., and £42, 8s. Valuation (1860) £3311, (1885) £4728, 18s. 9d., *plus* £17 for railway. Pop. (1801) 676, (1831) 1018, (1861) 1061, (1871) 1195, (1881) 1126.—*Ord. Sur.*, shs. 76, 86, 75, 85, 1874-76.

Rhynns. See Rhinns.

Ricawr, Loch, a troutful lake in Straiton parish, Ayrshire, 8 miles SSE of Straiton village. Lying 960 feet above sea-level, it has an utmost length and breadth of 6 and 5 furlongs, and sends off a streamlet 3 miles east-north-eastward to the head of Loch Doon.—*Ord. Sur.*, sh. 8, 1863.

Riccarton, a parish on the northern border of Kyle district, Ayrshire, containing a southern suburb of Kilmarnock and the greater part of the town of Hurlford. It is bounded N by Kilmarnock, E by Galston, S by Craigie, SW by Symington, and W by Dundonald. Its utmost length, from E to W, is 4¾ miles; its utmost breadth, from N to S, is 2¾ miles; and its area is 7598½ acres, of which 48¾ are water, and 1259½ belong to a detached south-eastern portion (2¼ × 1¼ miles), which, approaching to within ¼ mile of the main body, is bounded S by Mauchline, and on all other sides by Galston. The river Irvine winds 7⅛ miles west-south-westward along all the northern border, though the point where it first touches and that where it quits the parish are only 4¾ miles distant as the crow flies. At the NE corner of the parish it is joined by Cessnock Water, which winds 5 miles north-by-eastward, viz., 1⅛ mile along the Galston boundary, 1⅞ mile across the eastern interior, and 1⅝ mile again along the Galston boundary. Higher up, Cessnock Water runs 1⅝ mile westward along all the southern border of the detached portion. In the extreme W the surface declines along the Irvine to close upon 70 feet above sea-level; and thence it rises to 186 at Whalriggs, 448 at the Craigie border, and 442 near Hillhouse in the detached section. The parish, on the whole, is gently undulating, but rises gradually towards the S and SE, till it terminates in a low ridge of hills, whose highest points command an extensive and brilliant view to the N and W. The banks of Cessnock Water are picturesque, but those of the Irvine are very tame. The rocks are chiefly of the Carboniferous formation. Coal, which exists in great abundance, and which seems to have been worked from a very early period, has been increasingly mined since the formation of the railways. Much anthracite or blind coal is likewise raised, and limestone has been quarried both for mortar and for manure; whilst iron working is carried on at Hurlford. The soil, in most parts, is strongly argillaceous. Nearly 500 acres are under wood, and most of the remainder is either arable or pasture, 700 acres of moss having in great measure been reclaimed in the course of the last half century. Riccarton was anciently a chapelry, subordinate to the parish church of Dundonald; and it followed the fortunes of that church in annexation, from 1229 till 1238, to the short-lived convent of Dalmulin, and in subsequent annexation to the monastery of Paisley. At some period of the Paisley monks' possession, it was made a parish church, and treated by them as a vicarage. After the Reformation, it was incorporated with Craigie; but, in 1648, it was disunited from that parish, and made independent. The name Riccarton was originally Richardstown or Ricardston, and seems to have been derived from a Richard Wallace, whom tradition declares to have been the uncle of the celebrated Sir William, the patriot, but who probably lived too early to claim that honour. In the 13th and 14th centuries the lands of Ricardston belonged to a family of the name of Wallace, or, as the word was anciently written, Waleys. During the reign of Alexander II., and under the second Walter the Steward, Richard Waleys held considerable estates in other parts of Kyle-Stewart, and appears to have been one of the most considerable of the Steward's vassals; and he very probably was the ancestor of the Ricardston Wallaces, the first holder of their property, and the person from whom it derived its manorial designation. A seat of Sir Ronald Crawford, the maternal uncle of Sir William Wallace, stood on the site of Yardside farmhouse, and is closely associated, in traditionary story, with early exploits of the Scottish patriot. Sir John Cunninghame of Caprington (d. 1684), a very eminent lawyer in the time of Charles II.; and Sir James Shaw (1764-1843), Lord Mayor of London and a distinguished benefactor of Kilmarnock, were natives of Riccarton. Mansions, noticed separately, are Bellfield, Caprington Castle, Dollars, Milrig, Shawhill, and Treesbank. The Duke of Portland is chief proprietor, 11 others holding each an annual value of £500 and upwards. Giving off since 1874 the greater part of Hurlford *quoad sacra* parish, Riccarton is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £480. The parish church surmounts a mound in the southern suburb of Kilmarnock, partly natural and partly artificial, and formerly known as the 'Seat of Justice.' Built in 1823, and containing 1192 sittings, it is a large edifice with a lofty spire, which forms a conspicuous object in a wide circumjacent landscape. Five schools—Crossroads public, Hurlford public, Riccarton public, Barleith, and Caprington infant—with respective accommodation for 76, 499, 147, 235, and 100 children, had (1884) an average attendance of 59, 319, 139, 151, and 92, and grants of £46, 11s.,

£257, 4s., £90, 14s., £128, 1s., and £74, 11s. Landward valuation (1880) £27,432, 19s. 8d., (1885) £24, 835 15s. 5d., *plus* £6185 for railway. Pop. (1801) 1364, (1831) 2499, (1861) 5629, (1871) 5845, (1881) 7112, of whom 1940 were in the parliamentary burgh of Kilmarnock, and 3728 in the town and *quoad sacra* parish of Hurlford.—*Ord. Sur.*, sh. 22, 1865.

Riccarton, a station in Castleton parish, S Roxburghshire, on the Waverley route (1862) of the North British railway, at the junction of the Border Counties line towards Hexham and Newcastle, 62¾ miles WNW of Newcastle, 32½ NNE of Carlisle, and 13 S by E of Hawick, under which it has a post and telegraph office.—*Ord. Sur.*, sh. 17, 1864.

Riccarton, a mansion, with a fine park, in Currie parish, Edinburghshire, 1½ mile NNW of Currie village, and 6 miles SW of Edinburgh. Its oldest part, a square tower at the W end, is supposed to have been given by King Robert Bruce as part of the dowry of his daughter, Marjory, on her marriage to Walter, High Steward of Scotland; but the main body of the house was built in 1621; and a large addition in the Elizabethan style was completed in 1827. Sir Thomas Craig of Riccarton (1548-1608) was a distinguished writer on the feudal law; and the estate remained with his descendants till 1823, when it passed to a kinsman, James Gibson, W.S. (1765-1850), who in 1831 was created a baronet as Sir James Gibson-Craig of Riccarton. He was a Liberal in politics, as likewise was his son, the Rt. Hon. Sir William Gibson-Craig, M.P. (1797-1878), whose son, Sir James Henry, third Bart. (b. 1841), holds 1882 acres in Midlothian, valued at £6037 per annum.—*Ord. Sur.*, sh. 32, 1857. See John Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Rickarton, a *quoad sacra* parish in Fetteresso parish, Kincardineshire, 5 miles NW by W of Stonehaven, under which it has a post office. Constituted in 1872, it is in the presbytery of Fordoun and the synod of Angus and Mearns; the minister's stipend is £186. The church sprang from a bequest of £3278 by the late Rev. George Thomson, minister of Fetteresso; and was built, in 1870-71, at a cost of £1400. Rickarton House is a good modern mansion on the N bank of Cowie Water, 3 miles NW of Stonehaven; and the estate, long held by the Hepburns, belongs now to Alex. Baird, Esq. of Urie. Pop. of *q. s.* parish (1881) 473, of whom 10 were in Glenbervie parish.—*Ord. Sur.*, shs. 67, 66, 1871.

Riddell. See Lilliesleaf.

Riddon, Loch, a sea-loch on the mutual border of Kilmodan and Inverchaolain parishes, Argyllshire. Opening from the most northerly part of the Kyles of Bute, and penetrating 3¾ miles northward to the mouth of Glendaruel, it has a maximum breadth of 6½ furlongs, and in scenery is not unlike the most picturesque reaches of the Kyles themselves. It contains, in its mouth, a group of islets including Ellan Dheirrig; has, on its left side, the steamboat pier of Ormidale; and leads, through fine reaches of Highland scenery, towards Holy Loch, Strachur, and Otter Ferry.—*Ord. Sur.*, sh. 29, 1873.

Riecawr, Loch. See Ricawr, Loch.

Rigg. See Gretna.

Riggend, a village in New Monkland parish, Lanarkshire, 3½ miles N of Airdrie.

Rigside. See Douglas.

Ringans, St. See St Ninians.

Ringford. See Tongland.

Rinnes. See Ben Rinnes.

Rinns. See Rhinns.

Ristol or **Isle Ristol,** an island of Lochbroom parish, Ross-shire, lying off the entrance of Loch Broom, 14½ miles NW of Ullapool. Separated from the mainland by a channel only 1 furlong broad, and dry at low water, it has an utmost length and breadth of 8⅛ and 8 furlongs, and rises to a height of 234 feet. Pop. (1861) 26, (1871) 27, (1881) 0.—*Ord. Sur.*, sh. 101, 1882.

Rives. See Rhives.

Roadmeetings, a village in Carluke parish, Lanarkshire, 1½ mile E by S of the town. Pop., with Yieldshields, (1881) 432.

Roag, Loch, an intricate sea-loch of Uig parish, on the W side of Lewis, Outer Hebrides, Ross-shire. Opening from the Atlantic, it has a width of 7⅜ miles at the entrance; penetrates the land south-eastward to the extent of about 10 miles; is sectioned lengthwise, by a series of islands, into two main channels, called Loch Roag proper and Loch Bernera or West Loch Roag; measures 6 miles in mean breadth, over a length of 6½ miles from its entrance, but is bisected, over all that length, by Bernera island and some adjacent islets; forks, in its upper part, into two separate, widely detached, narrow reaches, Loch Ceann Thulabhig and Little Loch Roag; contains, all round from entrance to head, as many as 38 islands and islets; and is rendered so intricate by islands, islets, headlands, bays, and winding passages, as to demand no ordinary degree of attention and skill for its navigation, while the entrance of Loch Roag proper is so obscure that it might escape the observation of a boat's crew passing within a hundred yards distance. All the land of the islands, and of the immediate coasts, is either low and tame, or terminates in such cliffs of gneiss as have little elevation, much ruggedness, and no beauty. Several salmon streamlets run to the heads and sides of the lochs; and three of them have a run of respectively 6, 7, and 8 miles.—*Ord. Sur.*, shs. 105, 104, 1858.

Roan. See Ellan-nan-Ron.

Robertland, an estate, with a mansion and the site of an old castle, in Stewarton parish, Ayrshire, 2 miles NE of the town.

Roberton, a village and an ancient parish in the Upper Ward of Lanarkshire. The village, standing near the left bank of the river Clyde, 3 miles SSE of Lamington station, has a U.P. church, rebuilt in 1873. The ancient parish, lying around the village, was united to Wiston in 1772.—*Ord. Sur.*, sh. 23, 1865.

Roberton, a parish of Roxburgh and Selkirk shires, containing the hamlet of Deanburnhaugh, on the Dean Burn near its junction with Borthwick Water, 7¾ miles WSW of Hawick, under which it has a post office. At no distant date this hamlet contained above 100 inhabitants; now its population is under 20. The parish is bounded NE by Ashkirk and Wilton, SE by Hawick and Teviothead, SW by Eskdalemuir in Dumfriesshire, and NW by Ettrick, Kirkhope, and Selkirk (detached). Its utmost length, from NE to SW, is 12⅝ miles; its utmost breadth is 5¼ miles; and its area is 46⅓ square miles or 29,666⅔ acres, of which 247 are water, and 18,038½ belong to Roxburghshire, 11,628¼ to Selkirkshire. Borthwick Water, rising close to the Dumfriesshire border at an altitude of 1400 feet, winds 14⅞ miles north-eastward and eastward, until it passes off from the parish 1⅛ mile above its influx to the Teviot; and during this course it is fed by a score of burns. Rankle Burn runs 2¾ miles north-eastward along the Ettrick boundary; and Ale Water, rising near Henwoodie, at an altitude of 1100 feet, runs 8 miles north-eastward, at one point traversing Alemuir Loch (¼ × ¼ mile), and, lower down, tracing for 2⅝ miles the Ashkirk boundary. Kingside Loch (2⅛ × 1⅝ furl.) on the Ettrick boundary has been drained; but other lakes, still existing, are Hellmuir Loch (3½ × 2½ furl.) on the Kirkhope boundary, Crooked Loch (2 × 1 furl.) at the meeting-point with Kirkhope and Ettrick, and smaller Windylaw, Philhope, Broadlee, and Bog Lochs in the interior. Where Borthwick Water quits the parish, the surface declines to close on 500 feet above the sea; and chief elevations to the NW of the stream, as one goes up the glen, are *Borthaugh Hill (880 feet), Highchesters Hill (848), Smasha Hill (1092), Hangingshaw Hill (1044), Firestane Edge (1155), Mid Hill (1207), *Coutlair Knowe (1371), Crib Law (1389), Long Tae (1438), and *Craik Cross Hill (1482); to the SE, Todshaw Hill (938), *High Seat (1140), *Calfshaw Head (1320), *Pike Hill (1369), and *Stock Hill (1561), where asterisks mark those summits that culminate on the confines of the parish. Thus Roberton, though not far

distant from the centre of the southern Highlands, and though walled in by one of the middle stretches of their watersheds, is not strictly mountainous, and possesses both lowness of surface and softness of feature compared with either Ettrick on its one side, or Liddesdale on its other. The two vales which, to a certain extent, traverse it lengthwise, are narrow along the bottom, or are the merest glens; but they have gently sloping screens, and, except where beautified with wood, are in a state of cultivation. The hills are as rich in all the common kinds of game as the waters are in fish, so that the district is an attractive one to the sportsman. Though heath stretches out in patches, and almost every farm has its particular moss, the lands of the parish may, in general, be viewed as an assemblage of green hills, pleasantly and richly pastoral. The rocks are mainly Silurian, but include a seam of excellent ironstone. The soil in the bottom of Borthwick vale is of good quality; on the skirts and lower parts of the hills is gravelly, shallow, and dry; and on their summits is wet and boggy. Barely 2000 acres are either regularly or occasionally in tillage; about 500 are under wood; and the rest of the parish, not covered with moss, is principally cattle pasture or sheep-walk. The antiquities include a reach of the CATRAIL and six or seven camps, some Caledonian and some Roman, but all locally known as Picts' works. Mansions, all noticed separately, are BORTHWICKBRAE, BORTHWICK-SHIELS, CHISHOLM, HARDEN, and HOSCOTE; and 6 proprietors hold each an annual value of more, 3 of less, than £500. Roberton is in the presbytery of Selkirk and the synod of Merse and Teviotdale; the living is worth £353. The old parish church, 3 furlongs from the left bank of Borthwick Water, and 5 miles W of Hawick, was probably built in 1659 (the date upon it), to supersede the older kirk of HASSENDEAN. The new parish church, nearer the public road, was built in 1863 at a cost of £2000, and is a good Gothic edifice, containing 328 sittings. Two public schools, Howpasley and Roberton, with respective accommodation for 36 and 122 children, had (1884) an average attendance of 13 and 79, and grants of £26, 17s. 6d. and £77, 14s. 6d. Valuation (1864) £9806, 16s. 7d., (1885) £10,068, 3s. 10d., of which £6212, 19s. 1d. was for the Roxburghshire portion. Pop. (1801) 618, (1841) 757, (1861) 640, (1871) 593, (1881) 567, of whom 317 were in Roxburghshire. —*Ord. Sur.*, shs. 17, 16, 1864.

Robgill Tower, an old baronial mansion in the detached portion of Dornock parish, Dumfriesshire, near the right bank of Kirtle Water, 2¼ miles SE of Kirtlebridge station. It belonged formerly to Gen. Sir Æmilius Irving, Bart. (1751-1828).—*Ord. Sur.*, sh. 10, 1864.

Rob Roy's Cave. See CRAIGROYSTON.

Robroyston, an estate, with a modern mansion, in Cadder parish, Lanarkshire, 4 miles NE of Glasgow. A cottage on it, standing till 1826, is said to have been the place where Sir William Wallace was betrayed to the English; and a neighbouring lake, which figures in the history of the patriot's betrayal, has been nearly all drained, and is now represented by a gloomy expanse, partially engirt with pine trees.—*Ord. Sur.*, sh. 31, 1867.

Rochsoles, an estate, with a mansion, in New Monkland parish, Lanarkshire, 2 miles NNW of Airdrie. Its owner, Lieut.-Col. Montagu Gilbert Gerard, C.B. (b. 1843; suc. 1880), holds 1141 acres in the shire, valued at £4163 per annum.—*Ord. Sur.*, sh. 31, 1867.

Rockcliff, a hamlet in Colvend parish, Kirkcudbrightshire, 7 miles SE of Dalbeattie.

Rockfield, a fishing village on the E coast of Tarbat parish, NE Ross-shire, 1⅝ mile SSE of Portmahomack. It has a small pier and 18 boats.

Rockhall, a mansion in Mouswald parish, Dumfriesshire, 6 miles E of Dumfries. Its owner, Sir Alexander Davidson Grierson of Lag, eighth Bart. since 1685 (b. 1858; suc. 1879), holds 3514 acres in the shire, valued at £3084 per annum.—*Ord. Sur.*, sh. 10, 1864. See DUNSCORE.

Rodono, a commodious hotel in Ettrick parish, Selkirkshire, on the W shore of St Mary's Loch, ¾ mile from its head, and 14 miles SSW of Innerleithen. It was built as a gentleman's seat in 1866; and its architecture and grounds contribute highly to the scenery of the lake. The name is a revival of Rodonna, an ancient barony comprising the vale of Megget Water, and granted by Alexander II. in 1236 to the monks of Melrose.—*Ord. Sur.*, sh. 16, 1864.

Roe, Meikle. See MEIKLE ROE.

Rogart, a parish of SE Sutherland, containing a post and telegraph office of its own name, and also a station on the Sutherland railway (1868), 7½ miles W by N of Golspie, 10 E by N of Lairg, and 19 NE of Bonar-Bridge. It is bounded NW by Farr, NE and E by Clyne, SE by Golspie and Dornoch (detached), S by Dornoch, SW by Creich, and W by Lairg. Its utmost length, from N to S, is 15⅜ miles; its utmost width, from E to W, is 9⅜ miles; and its area is 105 square miles or 67,174$\frac{3}{10}$ acres, of which 907⅛ are water. The river BRORA, formed in the NW corner of the parish, at 783 feet above sea-level, by head-streams that rise at altitudes of from 1500 to 1600 feet, runs 14½ miles south-by-westward, south-eastward, and east-north-eastward—for the last 1⅝ mile along the Clyne boundary—until it passes away into Clyne. The river FLEET, entering from Lairg 9½ furlongs below its source, flows 10 miles east-south-eastward, till it quits the parish at its SE corner; and is followed pretty closely by the railway, which, ¾ mile above the station, crosses the river by a stone arch viaduct of 55 feet span. Of thirty-three lochs and lochlets the largest are Loch BUIE (1¼ × ¼ mile; 527 feet) at the meeting-point with Creich and Dornoch parishes; Loch Cracail Mor (6 × 1½ furl.; 620 feet) at the meeting-point with Creich and Lairg parishes; Loch CRAGGIE or Creagach (1 mile × 2½ furl.; 525 feet) on the Lairg boundary; Loch Beannaichte (7 × 2½ furl.; 970 feet) and Glas-Loch Mor (5½ × 2¾ furl.; 1190 feet) in the northern interior; Loch Bad an Aon-Tighe (6 × 1¾ furl.; 620 feet) and Loch Beannach (4½ × 3 furl.; 785 feet) on the Clyne boundary; and Loch an t-Salachaidh (5 × 1⅛ furl.; 552 feet) on the Golspie boundary. The surface is everywhere hilly, but hardly mountainous, and sinks in the SE along the Fleet to 17, in the E along the Brora to 290, feet above sea-level. Chief elevations are Meall Mor (900 feet), Creagan Glas (1028), and An Stocbheinn (1104), to the S of the Fleet; Cnoc Ard an Tionail (876) and Cnoc na Sguaibe (1056), between the Fleet and the Brora; Cnoc Liath-bhaid (937), Meallan Liath Mor (1516), and Meall an Fhuarain (1645), to the N of the Fleet. In both Strathfleet and Strathbrora there are several good patches of haugh-land, some being of medium loam; but peat-earth covers fully nine-tenths of the entire area, and there are many broad swamps of deep moss. Gneiss, veined with quartz and containing a large proportion of mica, is the predominant rock; and granite is fairly plentiful, partly *in situ*, but chiefly in surface or embedded boulders. Not more than 1200 acres are regularly or occasionally in tillage; and the rest of the parish, mosses and waste ground excepted, is chiefly disposed in sheep pasture. Though some of them are too small, the greater number of the crofter holdings in Rogart are superior to many in other parts of the county, and very much better than the majority of crofts in the Western Isles. Some remains of an ancient stone circle are at Corrie; and vestiges of tumuli, Scandinavian buildings, and ancient camps, with memorials of ancient battles, are in many places; and eleven silver brooches were discovered during the construction of the railway. In April 1650 the Marquis of Montrose's force, on their way to the battlefield of Invercharron, passed unmolested through Strathfleet, and halted for a night at Rhin. (See KINCARDINE.) Lady Matheson of the Lews holds 3 per cent. of the entire rental, and the Duke of Sutherland holds nearly all the remainder. Rogart is in the presbytery of Dornoch and the synod of Sutherland and Caithness; the living is worth £192. The parish church, nearly 2 miles NNE of the station,

was built in 1777, and commands an extensive and beautiful view. A new and handsome manse was built in 1884, quite close to the church, and nearer the public road than the old manse, which occupied an unusually high site. The Free church stands 1¾ mile NNW of the station. Two public schools, Rhilochan and Rogart, with respective accommodation for 50 and 80 children, had (1884) an average attendance of 27 and 35, and grants of £25 and £29, 12s. A third, Blarich, accommodating 100 pupils, was opened in Oct. 1884; and a side school at West Langwell is attended by about a dozen children. Valuation (1860) £2497, (1884) £4947, 10s. Pop. (1801) 2022, (1831) 1805, (1861) 1439, (1871) 1341, (1881) 1227, of whom 1063 were Gaelic-speaking.—*Ord. Sur.*, shs. 103, 102, 108, 109, 1878-81.

Romach, Loch, a lake on the mutual border of Rafford and Edinkillie parishes, Elginshire, 3 miles S by E of Rafford church. Lying 515 feet above sea-level, it extends ¾ mile eastward, is only 100 yards wide, has very precipitous banks, contains small trout, and sends off the Black Burn towards the valley of Pluscarden.—*Ord. Sur.*, sh. 85, 1876.

Romanno Bridge, a hamlet in Newlands parish, Peeblesshire, on Lyne Water, 3½ miles SSE of West Linton, 4⅝ SW of Lamancha station, and 19¾ SSW of Edinburgh. A favourite angler's haunt, it has a mill, Newlands public school (1870), and a steep narrow bridge, from which it takes its name. Romanno House, 5 furlongs to the NE, is a plain two-story mansion of the era seemingly of George I. The estate of Romanno belonged to the Murrays from 1513 till 1676, when Margaret Murray married Dr Alexander Pennicuik of Newhall (1652-1722), author of the *Description of Tweeddale.* On 1 Oct. 1677 Romanno was the scene of a 'memorable polymachy' betwixt two clans of Gypsies, the Faws and Shaws, who had come from Haddington fair; and in 1683 Dr Pennicuik inscribed on the lintel of a dove-cot:—

> 'The field of Gipsie blood, which here you see,
> A shelter for the harmless dove shall be.'

In 1720 the property was disposed of to George Kennedy, W.S., whose descendant, Major George Kennedy (b. 1819; suc. 1842), holds 595 acres in the shire, valued at £697 per annum. The 'Romanno Terraces,' on the face of a hill above Newlands church, are fourteen in number, and 6 to 12 feet broad. The late Dr Chambers believed that 'they were designed for horticultural or agricultural operations, and probably existed from an early British period.'—*Ord. Sur.*, sh. 24, 1864.

Rona, a small triangular island of Barvas parish, Outer Hebrides, Ross-shire, 45 miles NNE of the Butt of Lewis, in lat. 59° 7′ N and long. 5° 50′ W. It has an utmost length and breadth of 7 and 6 furlongs, and rises at its south-eastern corner to a height of 355 feet above sea-level. It was formerly inhabited by several families, who maintained themselves partly by agriculture, partly by fishing; and about 1850 it was offered gratis by the late Sir James Matheson to Government for a new penal settlement. It contains remains of a very ancient oratory built of uncemented stone, and the ruinous shells of five or six huts.—*Ord. Sur.*, sh. 113, 1882.

Rona, an island of Portree parish, Inverness-shire, in the belt of sea between the Isle of Skye and the mainland of Ross-shire, ½ mile N by E of Raasay, 8½ miles NW of Applecross village, and 11½ NNE of Portree Extending 4⅜ miles north-by-eastward, and nowhere more than 1¼ mile broad, it forms a ridge nearly in a line with Raasay; rises to an extreme altitude of 404 feet above sea-level; is separated, by deep irregular vales, into a series of rocky hills; presents an appearance prevailingly tame and cheerless; is appropriated chiefly to the rearing of black cattle; contains a scattered village and some arable ground at the head of a small bay; has a tolerably good harbour, called Acairseid Haven; and is crowned with a lighthouse, built in 1857 at a cost of £5063, and showing a flashing white light every 12 seconds, visible at the distance of 20 nautical miles. Pop. (1841) 165, (1861) 147, (1871) 157, (1881) 159.—*Ord. Sur.*, sh. 81, 1882.

Ronaldshay, North, an island and a *quoad sacra* parish in Cross and Burness parish, Orkney. The island is the most northerly of the North Isles of Orkney, lying 2½ miles N of Tafts Ness in Sanday, and 15 E of Papa Westray. Divided from Sanday by North Ronaldshay Firth, very dangerous to navigation, it measures 3 miles in extreme length from N by E to S by W, and 2 miles in extreme breadth. Its outline is diversified by five headlands—Dennis Head in the NE, Brides Ness in the SE, Strom Ness in the S, Twinyas Ness in the SW, and Tor Ness in the NW. The seaweed-covered shores are flat and rocky; and the interior is much of it low and flat, but rises gently towards the middle of the island, which contains three small lakes, and consists partly of coarse slate rock. The soil is sandy but fertile, mixed in some places with clay, and mostly in a state of cultivation. Antiquities are several tumuli and vestiges of Burrian Castle, near which, on the southern headland, is a lighthouse built in 1854 at a cost of £12,927, whose flashing light attains its brightest state every ten seconds, and is visible at a distance of 17 nautical miles. Dr Traill of Woodwick is sole proprietor. The *quoad sacra* parish is identical with the island, and was constituted by the General Assembly in 1831, reconstituted by the Court of Teinds subsequent to 1843. It is in the presbytery of North Isles and the synod of Orkney; the minister's stipend is £120. The parish church is a parliamentary one, and there is also a Free church. Pop. (1811) 384, (1831), 522, (1861) 532, (1871) 539, (1881) 547.

Ronaldshay, South, an island of Orkney. Most southerly of the Orkneys with exception of the Pentland Skerries, it occupies the SE corner of the archipelago, and is washed on the N by Water Sound, about ½ mile broad, dividing it from Burray; on the E by the German Ocean; on the S by the eastern entrance of the Pentland Firth, 6½ miles wide, dividing it from Duncansbay Head; on the W by the northern expansion of the Pentland Firth, or the entrance of Scalpa Flow, dividing it from Swona, South Walls, and Flotta. It measures 7⅜ miles in extreme length from N by E to S by W; whilst its breadth varies between 1½ and 6⅛ miles. It has mainly an oblong outline, diversified with headlands and bays; is mostly low and flat, attaining a maximum altitude of 389 feet in the Ward Hill; and, in the aggregate of both coast and interior, presents a much richer and more generally cultivated appearance than perhaps any equal extent of Orcadian territory. Grim Ness, Stews Head, and Old Head project on the eastern coast at such distances from one another as to divide the entire length of that coast into three fairly equal sections; Brough Head projects in the extreme S, and confronts Duncansbay Head in Caithness; the Wing and Barth Head project slightly in the SW, opposite Swona; Herston Head and Hoxa Head terminate considerable peninsulas in the NW, opposite Flotta; and three of the headlands—two in the E and one in the W—present bold rocky fronts to the ocean, each with an elevation of over 200 feet above sea-level. Sandwick Bay, on the W, is a slender incurvature about 3½ miles long, between Barth Head and Herston Head; Widewall Bay, in the W, between the peninsulas terminating in Herston Head and Hoxa Head, opens in an entrance little more than ½ mile wide, penetrates the land north-eastward and south-eastward to an extent of 2¼ miles, ramifies into baylets at the head, and affords safe anchorage to vessels of 600 tons burden; and St Margaret's Hope, in the NW, is a comparatively small bay, but forms one of the safest and best harbours in Scotland for small craft. The rocks throughout the island are either sandstone or dark blue slate; and the sandstone is quarried in ordinary blocks for building purposes, while the blue slate has the character of flag, and is raised, at Herston and Hoxa, in slabs of from 6 to 8 feet in diameter. Agriculture is practised in the same way as in other prime parts of the Orkneys; and the fishing of cod and herrings is very extensively pro-

secuted. Remains of Picts' houses are numerous and extensive; some large standing-stones, supposed to be of pre-Scandinavian origin, are near the manse; and ruins of pre-Reformation chapels are in seven places. The parish of South Ronaldshay includes the inhabited islands of South Ronaldshay, Burray, Swona, Hunda, and Pentland Skerries, and comprehends the ancient parishes of St Mary or the South Church (consisting of Swona, the Pentland Skerries, and more than one-third of South Ronaldshay), St Peter or the North Church (consisting of the rest of South Ronaldshay), and Burray (consisting of Burray, Hunda, and the uninhabited island of Glimsholm). Its total land area is 15,062 acres. It is in the presbytery of Kirkwall and the synod of Orkney; the living is worth £250. The parish church of South Ronaldshay, St Peter's, stands on the eastern shore of the island, was built in the 13th century, and contains 273 sittings. The church of St Mary, on the south-western shore, contains 413 sittings, and was raised to *quoad sacra* status in 1875. Its minister's stipend is £148. Other places of worship are Burray chapel of ease, South Ronaldshay Free church, and the U.P. churches of Burray and South Ronaldshay. Five schools—Burray, Grimness, Hope, Widewall, and Tomisen's—the first four public and of recent erection, with respective accommodation for 130, 60, 140, 110, and 218 children, had (1884) an average attendance of 114, 47, 117, 61, and 85, and grants of £107, 1s., £38, 5s. 6d., £127, 10s. 6d., £78, 18s. 6d., and £83, 8s. 6d. Valuation of parish (1884) £4406, 4s. 7d. Pop. of South Ronaldshay island (1821) 1949, (1861) 2551, (1881) 2557; of the parish (1801) 1881, (1831) 2711, (1861) 3282, (1871) 3228, (1881) 3314, of whom 695 were in St Mary's *quoad sacra* parish.

Ronay, an island of North Uist parish, Outer Hebrides, Inverness-shire, 1 mile S of the south-eastern extremity of North Uist island, and 2 miles NE of Benbecula. It measures 2¼ miles in length, and 1⅞ mile in extreme breadth; is much indented by the sea; has a belt of low productive land around its coast-line; and rises to a height of 600 feet above sea-level, presenting a rocky aspect in its higher grounds, and a broken surface down its eastern declivity. At one time it was regarded as of little or no value, but it has been improved by culture, so as now to be considered one of the best grazing grounds in North Uist parish. Pop. (1871) 6, (1881) 6.

Rosa. See GLENROSIE.

Roscobie, a place, with extensive lime works, in Dunfermline parish, Fife, 4¼ miles N of Dunfermline town.

Rosebank, a village in Dalserf parish, Lanarkshire, on the left bank of the river Clyde, nearly opposite Mauldslie Castle, 3¼ miles SE of Larkhall.

Rosebank, a mansion in the parish and near the town of Wick, Caithness.

Rosebank, a mansion in Kelso parish, Roxburghshire, near the left bank of the Tweed, a little way E of the town. It was, for some time, the residence of Sir Walter Scott.

Rosebery, an estate, with a small mansion, in Temple parish, Edinburghshire, on the left side of the river South Esk, 4 miles SW of Gorebridge. The ancient barony of Nicolson, in the quondam parish of Clerkington, it was purchased in 1695 by Archibald Primrose, M.P., and erected into the new barony of Rosebery—a title assumed by him on his elevation to the peerage of Scotland as Viscount in 1700, and Earl in 1703. He sold it in 1712; but the fourth Earl repurchased it in 1821. Its large and ancient mansion-house was demolished in 1805-12. See DALMENY.—*Ord. Sur.*, sh. 32, 1857.

Rosehall. See WHIFFLET.

Rosehall, an estate, with a mansion, in Creich parish, S Sutherland, 7½ miles SW of Lairg, under which there is a post office of Rosehall. The mansion stands near the left bank of Cassley Water, 3 furlongs above its influx to the Oikell, and has beautiful, well-wooded grounds. Rosehall gives designation to an Established mission chapel (1808; 260 sittings), a Free church, and a public school.—*Ord. Sur.*, sh. 102, 1881.

Rosehaugh, an estate in AVOCH parish, Ross-shire, 4 miles WSW of Fortrose. In 1864 it was purchased for £145,000 from Sir James Mackenzie, Bart. of Scatwell, by James Fletcher, Esq. (b. 1810), who has built a fine new mansion in the Renaissance style, besides effecting vast agricultural improvements, and who holds 11,095 acres in the shire, valued at £8545 per annum. See LETHAM GRANGE and pp. 104-107 of *Trans. Highl. and Ag. Soc.* (1877).—*Ord. Sur.*, sh. 84, 1876.

Rosehearty, a fishing village in Pitsligo parish, Aberdeenshire, on the coast of the Moray Firth, 4½ miles W of Fraserburgh, and 16 E by N of Banff. It is said to date from the 14th century, and to have originated partly with a few crofters, partly with a small body of shipwrecked Danes; and in 1681 it was constituted a burgh of barony, being governed now by a baron-bailie, a treasurer, and six councillors, under the superiority of Fordyce of BRUCKLAY. The 'Lodging House,' on the S side of its square, was built in 1753 for a Dowager Lady Pitsligo; and another old house, the 'Jam,' bears date 1573. Rosehearty has a post office under Fraserburgh, with money order, savings' bank, and telegraph departments, a branch of the Union Bank, a good inn, a disused tolbooth, a Free church (1844), a U.P. church (1799), a public school, a weekly Saturday market, a horticultural society, and a harbour. The herring fishery, lasting from the middle of July till the end of August, employs 88 boats, manned by 186 fisher men and boys; and the commerce chiefly consists in the exporting of fish, grain, and potatoes, and the importing of coal, salt, lime, and timber. The harbour has a depth of 9 feet in neap tides and 14 in spring tides; is so situated on an exposed part of the coast as to possess much relative importance; and, being the property, not of the superior of the burgh, but of the feuars, has been a principal occasion of the town's prosperity. Pop. (1841) 750, (1861) 908, (1871) 1206, (1881) 1404.—*Ord. Sur.*, sh. 97, 1876.

Roseisle, College of, a hamlet in Duffus parish, Elginshire, 2¼ miles SSE of Burghead.

Rosemarkie, a parish containing a town of the same name on the Moray Firth coast of Ross-shire. The parish is bounded N by Cromarty, SE by the Moray Firth, S by Avoch, and W and NW by Kirkmichael. The boundary on the N is the Burn of Ethie. The extreme length of the parish from NE to SW is about 6 miles, the average breadth about 2, and the area 6980·382 acres, including 298·551 acres of foreshore, 0·130 of tidal water, and 6·584 of water. The coast lies along the upper part of the Moray Firth, the mouth of the Burn of Ethie being 1½ mile SW of the entrance to the Cromarty Firth; and at the SW end the promontory of Chanonry Ness projects 1½ mile into the Moray Firth, and from the point, on which there is a lighthouse, a ferry-boat crosses the Firth to Fort George (1 mile). To the N of the point is the fine sweep of the Bay of Rosemarkie, with its sandy beach, affording excellent facilities for bathing. To the NE of this the coast is bold, rocky, and romantic, and from the seaboard the surface rises, in some places slowly, in others more abruptly, to the NW, till, along the boundary, it merges in the lower slopes of the long broad table-land noticed under ARDMEANACH. From the high ground (242 feet) to the N of Rosemarkie Bay a very fine view is to be obtained of the upper reaches and S coast of the Moray Firth. The soil on the low grounds adjacent to the coast is mostly a fine black mould overlying gravel, and in most places, particularly on the beautiful flat about the town of Rosemarkie, is in a state of high cultivation; on the higher ground the quality is poorer and the subsoil is clay. The rocks of the sea-cliffs are principally gneiss, and those of the interior all the way to the north-western boundary are Old Red Sandstone. Along the shore, on the NE, there is a patch of richly fossiliferous shale, clay and limestone of Jurassic age, which was one of Hugh Miller's favourite haunts. The drainage in the N is carried off by Ethie Burn, and in the S by the Burn of Rosemarkie and the smaller streams that flow to it. The Burn of Ethie has

two small cascades, and the lower part of its course is through a deep, rocky, and singularly picturesque ravine, which has been admirably described by Hugh Miller in his *Old Red Sandstone*. The course of the Burn of Rosemarkie is noted for the sections of the boulder clay. 'Rosemarkie,' says Hugh Miller in his *Rambles of a Geologist*, 'with its long narrow valley and its red abrupt scaurs, is chiefly interesting to the geologist for its vast beds of the boulder clay. I am acquainted with no other locality in the kingdom where this deposit is hollowed into ravines so profound, or presents precipices so imposing and lofty.' One of the most interesting sections is the 'Kaes Craig,' immediately behind the town. The fame of the 'wondrous wizard Michael Scott' must have penetrated even thus far north, for we find his name associated by tradition with the curious points which, jutting out here from both sides of the firth at Chanonry Ness and Ardersier Point, would, were they not a mile awry, completely cut off the upper reaches of the Moray Firth from the sea. 'Michael had called up the hosts of Faery to erect the cathedral of Elgin and the chanonry kirk of Fortrose, which they completed from foundation to ridge, each in a single night—committing, in their hurry, merely the slight mistake of locating the building intended for Elgin in Fortrose, and that intended for Fortrose in Elgin; but, their work over and done, and when the magician had no further use for them, they absolutely refused to be *laid;* and, like a *posse* of Irish labourers thrown out of a job, came thronging round him clamouring for more employment. Fearing lest he should be torn in pieces—a catastrophe which has not unfrequently happened in such circumstances in the olden time, and of which those recent philanthropists who engage themselves in finding work for the unemployed, may have perhaps entertained some little dread in our own days—he got rid of them for the time by setting them off in a body to run a mound across the Moray Firth from Fortrose to Ardersier. Toiling hard in the evening of a moonlight night, they had proceeded greatly more than two-thirds towards the completion of the undertaking, when a luckless Highlander passing by bade God-speed the work, and, by thus breaking the charm, arrested at once and for ever the construction of the mound, and saved the navigation of Inverness.' Such at least is the Ross-shire form of the legend: the one obtaining on the southern shore of the firth is somewhat different. The latter tells how the Moray fairies, envious of the magnificent Chanonry Kirk originally built at Fortrose, and desiring to have it in their own district, formed one evening a road across the firth, and taking up Fortrose cathedral, transported it, without displacing one stone from another, to Elgin, and carried Elgin cathedral to Fortrose—all before morning, so that by daybreak the only traces of their night's work were the causeways of stones and sand jutting out into the firth where the road had been constructed, and the portions of this still remaining form the points. Chanonry Ness was, however, the scene of an act of pious zeal which must be considered as entirely compensating for anything 'uncanny' that may exist in connection with its origin. Episcopacy seems to have had a considerable hold in the neighbourhood, and the service-book which the Bishop of Ross had introduced about 1636 had been used 'peaceably' within the cathedral at Fortrose until the 11th of March 1638. On that day, however, 'about the ringing of the first bell, but before the last bell was rung,' a party of schoolboys, rushing into the church, carried off all the service-books, and, having procured materials for kindling a fire, proceeded to the Ness, intending to make a bonfire of the whole spoil. A sudden shower having, however, extinguished the flames, they tore the books all in pieces and threw the fragments into the sea. The Bishop preached, but he seems to have been much startled at the proceeding, for Spalding, who tells the story, says that 'He wes not longsum but schort at sermon, and thairefter haistellie gois to horss and spak with the bischop of Morray, syne spak with the Marques of Huntlie, and privately disgyssit he rode south, and to the King gois he directlie; ane veray bussie man thocht to be in bringing in thir service bookis, and thairfoir durst not for feir of his lyf returne to Scotland agane.' The old name of Rosemarkie was Rosemarkyne, the original Celtic form seeming to have been *Rosmbaircind*, and a monastery of Columban monks appears to have been established here about the middle of the 6th century under Lughaidh (Lugadius) or Moluoc, bishop of Lismore, who died, according to the *Chronicon Hyense*, in 592. A well near the seashore to the N is also associated with the name of St Kennet. About the 8th century Curitan, better known as Albanus Kiritinus or Curitan, or Bonifacius, who seems to have been a bishop of the Irish branch of the Celtic church which had conformed to Rome, came to Scotland, and is said to have founded a church at Rosemarkie about 716, a circumstance which led David I., when he founded the bishoprick of Ross in 1124, to make this the seat of the see, and hence, subsequently, the cathedral was built at Fortrose. The old building of Bonifacius is said to have been about the ground now occupied by the parish church. A sculptured stone found on the site of the present church is now carefully set up at the end of the church. It was found in 1821, but as it long lay uncared for, one side has been slightly worn by passing feet. The symbols are of the usual elaborate character, and there are some cup-shaped ornaments that are not very common. The chief residences are Flowerburn House and Raddery House. The parish contains Rosemarkie and Chanonry, which, though each possessing a separate charter, conjointly form the burgh of Fortrose, which has been separately noticed. Rosemarkie has a post office of its own under Inverness. The Black Isle combination poorhouse is on the shore of Rosemarkie Bay, half-way out Chanonry Ness.

The parish is in the presbytery of Chanonry and synod of Ross, and the living is worth £356 a year. Three incumbents of the name of Wood—father, son, and grandson—were ministers of the parish for over 150 years previous to the appointment of the present clergyman, the last of them dying in 1874. The parish church was erected in 1821-22, and contains 800 sittings. The other churches are noticed under Fortrose. Under the school board, Rosemarkie public school, with accommodation for 130 pupils, had, in 1884, an average attendance of 58, and a grant of £32. The parish is traversed by the main coast road from Inverness northwards. Two proprietors hold each an annual value of more than £1000, and 2 of between £750 and £1000. Valuation (1881) £4561, 3s. 9d., (1885) £4452, 17s. 11d. Pop. of civil parish (1755) 1140, (1793) 1262, (1831) 1799, (1861) 1545, (1871) 1441, (1881) 1357, of whom 643 were males and 714 females. Of this total 865 were in the ecclesiastical parish, 869 in the parliamentary burgh of Fortrose, 986 in the royal burgh, and 366 in the Rosemarkie portion, as against 314 in the Rosemarkie part in 1821.—*Ord. Sur.*, shs. 84, 94, 1876-78.

Rosemount, a mansion in Symington parish, Ayrshire, 2 miles NE of Monkton station. A large two-story edifice, it was rebuilt by Dr William Fullartoun about 1770, and has since undergone little alteration.—*Ord. Sur.*, sh. 14, 1863. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Rosemount, an estate, with a mansion, in Montrose parish, Forfarshire, 1 mile NNW of Dubton station.

Roseneath. See ROSNEATH.

Rosetta, a mansion in Peebles parish, Peeblesshire, 1 mile NNW of Peebles town. It was built by Thomas Young, M.D., who changed its former name, Acrefield, to Rosetta, in remembrance of his service in Egypt under Sir Ralph Abercromby in 1801.—*Ord. Sur.*, sh. 24, 1864.

Rosewell, a village in Lasswade parish, Edinburghshire, 5 furlongs S of Hawthornden station, and 4 miles SW of Dalkeith. It is largely inhabited by colliers employed in neighbouring coal mines; and it has a post office, with money order and savings' bank departments, an Established church, and a public school. The church (1872; 350 sittings) is a handsome edifice, and was raised

to *quoad sacra* status in 1874. Pop. of village (1861) 390, (1871) 790, (1881) 1394; of *q. s.* parish (1881) 2129.—*Ord. Sur.*, sh. 32, 1857.

Roshk, Loch. See ROSQUE.

Rosie. See GLENROSIE.

Roslin (Brit. *ross*, 'a point,' and *lynn*, 'a waterfall,' the name often and perhaps more correctly spelled Rosslyn), a *quoad sacra* parish containing a village, chapel, and castle of the same name, in the civil parish of Lasswade, in the county of Edinburgh. The village, which stands on high ground near the NW bank of the river North Esk, has in its neighbourhood three railway stations on different sections of the North British railway system, and each of them distant about 10 miles from Edinburgh. The nearest, Roslin, on the Edinburgh and Glencorse branch, is close to the village. Rosslyn Castle, on the Edinburgh and Penicuik branch, is distant about 1¼ mile, and Rosslynlee, on the Edinburgh and Peebles line, about 1¾ mile. By road the village is about 6½ miles S of Edinburgh; and from Polton station, 7 miles SSE of Edinburgh, a public footpath winds through the beautifully wooded glen * of the North Esk to the village, the distance being about 2½ miles. About 1440, under the fostering protection of William St Clair, Prince of Orkney, Duke of Oldenburg, and having a string of other titles that it would weary even a Spaniard to repeat, the place is said to have stood third in Scotland for importance. In 1456 it received from James II. a charter, erecting it into a burgh of barony, with right to a market cross, a weekly market, and an annual fair, and in 1622 its rights were confirmed by James VI., and again by King Charles I. It afterwards declined and became merely a small rural village, a condition from which the attractions of the chapel, the beauty of the surrounding district, and the establishment of industries in the neighbourhood have again raised it. It has a post office under Edinburgh, two hotels, a police station, a *quoad sacra* parish church, a Free church, and a public school, and Episcopal services are held in the old chapel. In the neighbourhood are a gunpowder manufactory, where an explosion, causing loss of life, occurred in 1872; a bleachfield, and paper-mills. The parochial church was built in 1827 as a chapel of ease, and has 444 sittings. The Free church, to the S of the village, was built in 1880-81 at a cost of £1600, and contains over 500 sittings. One of the inns dates from 1660, and is that where Dr Johnson and Boswell 'dined and drank tea' on their way to Penicuik House. The bridge over the North Esk, to the SW of the village, with malleable iron lattice girders in two spans each 64 feet wide, was constructed in 1871. To the WSW of the chapel is an old burying-ground, and near it a well, called St Matthew's Well. There seems to have been in this churchyard a chapel dedicated to St Matthew, and of older date than the present chapel. The old water supply having been found contaminated, a water and drainage district was formed in 1883, and a new supply got from the Moorfoot pipe of the Edinburgh Water Trust near Rosslynlee station. The total cost of operations was about £1600, and the maximum supply is 20,000 gallons per day. Roslin gives name to one of the battles of the Scottish War of Independence, in which, 24 Feb. 1303, an English army under Sir Ralph de Manton encamped on the moor of Roslin, to the N, in three divisions, was surprised and defeated by a Scottish force mustered in the uplands of Peebles and Lanark. Fordun tells how John Comyn and Simon Fraser 'with their abettors came briskly through from Biggar to Roslyn in one night with some chosen men, who chose rather death before unworthy subjection to the English nation,' and defeated the first line, but that while they were dividing the spoil, 'another line straightway appeared in battle array; so the Scots, on seeing it, slaughtered their prisoners and armed their own vassals with the spoils of the slain; then putting away their jaded horses, and taking stronger ones, they fearlessly hastened to the fray,' and overcame the new force. Hardly, however, had this been done when 'there appeared a third, mightier than the former, and more choice in their harness. The Scots were thunderstruck at the sight of them; and being both fagged out in manifold ways—by the fatigues of travelling, watching, and want of food—and also sore distressed by the endless toil of fighting, began to be weary and to quail in spirit,' but plucking up courage, and cheered by the patriotic words of their leaders, they killed their fresh prisoners, and 'by the power not of man but of God subdued their foes, and gained a happy and gladsome victory.' How far the great slaughter of prisoners is true may be doubted, but the English chroniclers admit the battle, and that a disaster befel the English arms. Pop. of village (1861) 467, (1871) 511, (1881) 611, of whom 307 were males. Houses (1881) 121. The *quoad sacra* parish, comprising the district round the village, and originally constituted in 1835, is in the presbytery of Dalkeith and synod of Lothian and Tweeddale. Pop. (1871) 1571, (1881) 1476.

The place gives the title of Earl of Rosslyn (1801) in the peerage of the United Kingdom to the family of St Clair-Erskine, and the present and fourth Earl succeeded in 1866. He has his seat at DYSART House, in Fife; and he holds in Midlothian only 99 acres, of £737 annual value. William de St Clair, son of Waldernus, Count de St Clair, came to England with William the Conqueror, and either he or one of his descendants is said to have settled here as early as 1100, but though this is doubtful, certainly a William de St Clair possessed the barony of Rosslyn in the time of David I., and his descendants added Cousland, Pentland, Cardaine, and other lands to their original domains, and in the 13th century stood at the head of the baronage of Midlothian. By the marriage of the eighth baron from King David's time, with Isabel, one of the daughters and co-heiresses of Malise, Earl of Stratherne, Caithness, and Orkney, his son Henry became Earl of Orkney, and in 1379 obtained a recognition of his title from Hakon VI., King of Norway. The connection of the family with the Orkney Islands has been noticed in the article dealing with them. The third Earl of Orkney, as has been there noticed, was created Earl of Caithness in 1455, and resigned the title of Orkney in 1470. He had three sons, of whom William, the eldest, by his first wife —Lady Margaret Douglas, eldest daughter of Archibald, fourth Earl of Douglas—inherited the title of Baron Sinclair, and was, through an heiress who in 1659 married John Sinclair of Herdmanston, in Haddingtonshire, the ancestor of the St Clairs, Lords Sinclair of Herdmanston. In favour of the second son—the eldest by a second marriage, in 1476, with Marjory, daughter of Alexander Sutherland of Dunbeath—his father resigned the title of Earl of Caithness; and the third, Oliver, continued the line of the St Clairs of Roslin. Sir Oliver's right was disputed by the eldest son, Sir William, who, however, resigned all claim to Roslin in 1482, on receiving Cousland, Ravenscraig Castle, Dubbo, Carberry, and Wilston. The last heir male of the Roslin branch died in 1778, but he had previously, in 1736, sold the estate to the Hon. James St Clair—better known as General St Clair—second son of Lord St Clair of Herdmanston. The General was succeeded by his nephew, Colonel James Paterson, on whose death without issue, in 1789, the property devolved on Sir James Erskine, Bart., second Earl of Rosslyn, grandson of the Hon. Catherine St Clair, General St Clair's second eldest sister, who married Sir John Erskine, Bart. of Alva. The present title was granted in 1801 to Alexander Wedderburn, Baron Loughborough of Loughborough (1795), Lord Chancellor from 1793 to 1801; and on his death in 1805, without issue, the titles passed to his nephew, Sir James St Clair-Erskine, who represented a collateral branch of the old family, and founded the present line. The third Earl of Orkney had conferred on him by King James II., in 1455, the office of Grand Master Mason of Scotland, which remained hereditary in the

* The scenery in the den is very pretty. 'I never,' says Dorothy Wordsworth, 'passed through a more delicious dell than the Glen of Roslin, though the water of the stream is dingy and muddy.'

family till the appointment was surrendered to the craft by the last heir male of line in 1736. Of the Sir William who lived in Bruce's time, a legend is told that he added Pentland to his lands by the fleetness of two hounds. A white deer had often on the Pentland Hills baulked the royal hounds, and on the king's asking one day whether any of his nobles had swifter dogs than his own, Sir William St Clair offered to wager his head that his two dogs, Help and Hold, would kill the deer before it could cross a certain burn. Bruce promised at once to give the forest of Pentland to the knight if he kept his promise. The deer was killed exactly at the burn, and so Sir William acquired the lands of Logan House, Kirkton, and Carncraig, and as, at a critical moment in the chase, he had invoked the aid of St Katherine, he erected the chapel of St Katherine in the Hopes on the Pentland Hills, now buried beneath the waters of the Compensation Pond. In connection with the event the rhyme addressed by Douglas to his dogs has been preserved :—

'Help! Hold! gin ye may,
Or Rosslyn tynes his head this day.

The seat here was the CASTLE of ROSLIN, which occupies an almost isolated rock to the SSE of the village, and in a most romantic position, overhanging a beautiful reach of the glen. The site is completely cut off from the bank behind by a deep transverse gully, across which a narrow single arch bridge affords the only access to the castle. The situation, though pleasant, seems but ill chosen for a place of strengh, for it is commanded by heights which press closely upon it, and look almost right down upon the tops of its chimneys. At what time the original castle was built is not known. An early castle seems to have been on a different site, near the present chapel; but probably the oldest part of the present building, a peel tower to the SE of the entrance, was erected by the Sir William St Clair who was one of the band of knights who set out with Bruce's heart to Palestine, and who fell fighting against the Moors in 1330. The great SW or donjon tower was added about 60 years later by Henry, the second Earl of Orkney, and large additions, showing French features, were made by his successor, the third Earl, who kept his semi-regal court here, and was, according to Father Hay, 'royally served at his own table, in vessels of gold and silver; Lord Dirleton being his master-household, Lord Borthwick his cupbearer, and Lord Fleming his carver. He had his halls and other apartments richly adorned with embroidered hangings. His princess, Elizabeth Douglas, was served by 75 gentlewomen, whereof 53 were daughters of noblemen, all clothed in velvet and silks, with their chains of gold and other ornaments, and was attended by 200 riding gentlemen in all journies, and if it happened to be dark when she went to Edinburgh, where her lodgings were at the foot of Black Fryar's Wynd, 80 lighted torches were carried before her.' For such magnificence, a magnificent dwelling must have been needed, but as the Father did not write till nearly 250 years after these events, he may have drawn somewhat on his imagination. Indeed, with all her grandeur, the princess does not seem to have been at all particular on some points, for we find that she kept dogs, of which she was very fond, in her bedroom, and even allowed them to whelp there, a circumstance that indirectly led to the destruction by fire of the greater part of the castle about 1452. It must have been repaired again very rapidly, for in 1455 we find it selected as the prison of Sir William Hamilton, who had been concerned in the Douglas rebellion. In 1544 it was almost totally destroyed by the English, during Hertford's invasion, and after being partially restored after 1580, was again injured in 1650 by General Monk, who plundered it after battering down the NW side. It was restored about 1682, but was again damaged by a mob in 1688; and Cardonell's picture a century later, and Grose's in 1790, show it utterly dilapidated—a mere rueful apology for the once grand fabric, whose name of

Roslin Castle is so intimately associated with ballad and song. The more modern portion to the SE is still inhabited. Over the fire-place of the great hall are the arms of Sir William Sinclair, who carried out the restorations at the end of the 16th century, and those of his wife, while his son's initials and the date 1622 are on the lintel of the door leading to the great staircase. The ceiling of the dining-room is also richly ornamented, and has the Rosslyn arms in the centre and the date 1622. The oldest portion of the old building is the triple tier of vaulted chambers on the NW, partly cut out of the rock. Some of them have been dungeons, others sleeping rooms for retainers, and one has evidently been the kitchen. Below is a garden, now noted for the excellence of its strawberries.

In the 16th, and the beginning of the 17th, century, Roslin was a favourite haunt of the Gypsies, whose introduction into the neighbourhood is attributed to Sir William St Clair, Lord Justice General, who in 1559, 'returning from Edinburgh to Roslin, delivered once an Egyptian from the gibbet on the burghmuir; upon which account the whole body of Gypsies were of old accustomed to gather in the stanks* of Roslin every year, where they acted several plays during the months of May and June. There are two towers which were allowed them for their residence, the one called Robin Hood, the other Little John.' A body of them seem subsequently to have settled down in the neighbourhood, for in 1628 the privy council ordered the Gypsies to be expelled from Roslin, 'where they have a peaceable abode, as if they were lawful subjects.'

ROSLIN CHAPEL stands to the SE of the village, on the brow of the high ground overlooking the glen of the North Esk. The eminence which it occupies is called College Hill. The name chapel which is popularly given to it is incorrect, for the building is simply all that was ever constructed—the chancel and Lady chapel—of what was intended to be the collegiate church of Rosslyn, erected on a cruciform plan after the usual manner of such buildings. Although the foundations of the whole seem to have been laid—those of the nave being dug up about the beginning of the present century—yet the portion actually built never got beyond the chancel and the eastern walls of the transepts. This part is 69 feet 8 inches long, 35 feet broad, and 41 feet 9 inches high to the top of the arched roof. The central aisle with clerestory is 15 feet wide, and on either side of it are aisles of five bays. At the E end is the Lady chapel, much lower in height than the rest of the building—the arched roof being only 15 feet from the pavement—and separated from it by a double row of three pillars. The floor is one step higher than in the other parts of the building, and the four altars seem to have been dedicated to the Virgin Mary, St Matthew, St Andrew, and St Peter. Reached by a flight of stairs in the SE corner, and stretching away to the E, is what is known as the crypt, and which 'has been a subject of sad puzzling to antiquarian brains. Was it a chapel, as generally asserted? Under the eastern window there was the stone altar; there is the piscina and the aumbry for the sacramental plate—but what else? A fire-place (which has its chimney), a goodly array of closets, a doorway, once communicating with the outside, and a second door, leading to an inner room or rooms. Its domestic appurtenances clearly show it to have been the house of the priestly custodier of the chapel, and the ecclesiastical types first named were for his private meditations; and thus the puzzle ceases,' so at least says Dr Hill Burton, though there are certain difficulties in the way still, as the crypt is contemporaneous with the design for a complete church. Though used as a sacristy afterwards, it seems more probable that it was originally a chapel with a small vestry on the NE and an entrance apartment on the SE. It is 15 feet high, 14 wide, and 36 long, and has a barrel roof. It is partly subterranean,

* Stank generally means a pool or a ditch, but in this and other places the meaning must be flat, perhaps even marshy, ground near a stream.

but owing to the slope of the ground on which the chapel stands, the E end is above the surface, and has a window. The whole building is remarkable for the peculiarities of its style, and—except the crypt, which is plain—for the richness of its ornament. It is often, from the unique nature of the design, considered to have been built by foreign masons, but it has been pointed out by Dr Daniel Wilson that 'many of the most remarkable features of Roslin Chapel are derived from the prevailing models of the period [when it was erected], though carried to an exuberant excess. The circular doorway and segmental porch, the dark vaulted roof, and much of the window tracery are all common to the style. Even the singular arrangement of its retro-choir, with a clustered pillar terminating the vista of the central aisle, is nearly a repetition of that of the Cathedral of St Mungo at Glasgow. Various portions of other edifices will also be found to furnish examples of arrangement and details corresponding with those of Roslin, as in the doorway of the south porch and other features of St Michael's, Linlithgow, and also in some parts of the beautiful ruined church of St Bridget, Douglas. It is altogether a mistake to regard the singularly interesting church at Roslin, which even the critic enjoys while he condemns, as an exotic produced by foreign skill. Its counterparts will be more easily found in Scotland than in any other part of Europe.' Both in tracery and arches, forms abandoned more than 100 years before re-appear, and where contemporary forms are found, the architect seems to have preferred the baronial to the ordinary ecclesiastical style. 'Its squat stumpy outline,' says Dr Hill Burton, 'is a great contrast to the slender gracefulness of its rival at Melrose. All the beauties of Rosslyn are superinduced on the design in the shape of mouldings and incrustations, and there is little to gratify the eye in its purely structural feature, unless it be the effect of aerial loftiness imparted to the central vaulting—a character to which its rich clusters of starry incrustations so well adapt themselves.' Another contrast to Melrose is the character of the workmanship, which has here no reference to the unseen, all fine works being in conspicuous positions, and the ornament stopping whenever it turns into an out-of-the-way corner. Dorothy Wordsworth had, for a wonder, no fault to find with Roslin, and even thought the architecture 'exquisitely beautiful,' while her brother has recorded his feelings in the sonnet, *Composed in Roslin Chapel.* On each side there are five aisle and clerestory windows, with seven buttresses, surmounted by crocketed pinnacles, and having niches for statues, but whether these were ever filled is doubtful—probably not, in spite of the many images shown in the views of Slezer and Father Hay. From the buttresses graceful and richly carved flying arches pass up to the clerestory wall, and there is a door on each side near the W end. In the interior the centre aisle is cut off from the side aisles by fourteen clustered pillars disposed in two rows, and though only 8 feet high, exquisitely rich in workmanship, and with capitals adorned with foliage and curiously wrought figures, among which may be mentioned thirteen figures of angels playing various musical instruments, including the bagpipes (!), Samson slaying the lion, the prodigal son feeding swine, and the crucifixion. The carvings on many of the brackets are also highly interesting. Notwithstanding the number of figure sculptures, they are far surpassed by the many representations of plants, including the harts-tongue fern, the curly-kail, oak leaves, etc., and almost the only ornament which is repeated more than once is the rose, probably with some idea of connection with the name of the place. The vaulted roof of the centre aisle is divided into five compartments, each with different flowers sculptured on them in check fashion. From the pillars flat arches—to use a very absurd expression—pass to the side walls, and these the guide, and even more weighty authorities, delight to point out as marvels of strength from their ability to support the weight of the roof above. The truth is, however, that there is a low-crowned arch over each, and that all the level part has to support is its own weight. All these are richly carved, one of the designs being a fox carrying off a goose, which a pursuing farmer endeavours to rescue; another, Samson pulling down the house of the Philistines; another, the Dance of Death, with figures of a king, a courtier, a cardinal, a bishop, a lady looking into a mirror, an abbess, an abbot, a farmer, a husband and wife, a child, a sportsman, a gardener, a carpenter, and a ploughman; another, a bishop in full pontificals; another, the seven deadly sins, represented by the proud pharisee, the drunkard, the careless shepherd, the rich fool, the miser, and the sinful lovers, while the devil in the dragon's mouth stretches out his claws for his prey; another, the cardinal virtues—clothing the naked, leading the blind, visiting the sick, feeding the hungry, comforting the fatherless, visiting the prisoner, and burying the dead; another, the inscription in Lombardic letters, 'Forte est vinum, fortior est rex, fortiores sunt mulieres; super omnia vincet veritas,' a quotation from Esdras. Letters on the N clerestory wall give the initial letters of 'William Lord Sinclair, fundit yis College ye zeir of God MCCCCL.' The decoration of the Lady chapel is very rich; the roof is groined, and from the keystones of the arches prominent and beautifully carved bosses project. In the SE corner is the finely sculptured Prentice Pillar. The ornaments upon the capital are Abraham offering up Isaac and a figure playing a bagpipe. From the top four spirals of flowers and foliage wind down the clustered shaft, while on the base are a number of dragons twisted together and cut in very high relief. The story whence the pillar takes its name is the well-known myth of the apprentice who proved a better workman than his master. The latter being unable to execute the design of this pillar from the plans furnished to him, had to go to Rome to examine a similar one there, and on his return found that his apprentice had, in his absence, overcome all difficulties and finished the work. Instead of being delighted at having trained such a workman, he was so overcome by jealousy, that he immediately killed the apprentice with a blow of his hammer, and thereafter paid the penalty of his own misdeed. Three heads, supposed to represent those of the apprentice, his weeping mother, and his wicked master, were long pointed out in the SW part of the chapel; and, to emphasise matters, the wound in the head of the first was marked with red paint. In connection with the story, and perhaps even its recent origin, it is noteworthy that Slezer, writing about 1693, calls it the Prince's pillar, as if named in honour of the founder of the chapel; and Defoe, writing in 1723, terms it the Princess's pillar. The western wall of the chapel is disfigured by a recently erected baptistry and organ gallery, such a method of dealing with an old building being in very bad taste. Some of the windows are filled with stained glass.

The burial-place of the St Clair family is in a vault underneath the chapel, the entrance being under a large flagstone between the N wall and the third and fourth pillars. Here ten barons of the line were buried in full armour, that being always the mode of interment prior to 1650, when the Sir William St Clair of the time was, on his death, buried in a coffin 'against the sentiments of the Duke of York,' afterwards James VII., 'who was then in Scotland, and several other persons well versed in antiquity, to whom,' however, his wife, 'Jean Spottiswoode, grandniece of Archbishop Spottiswoode, would not hearken, thinking it beggarly to be buried in that manner.' The vastness of the sum of money which she threw away upon the obsequies of her husband was the cause of the sumptuary act for 'restraining the exorbitant expenses of marriages, baptisms, and burials' which was passed by the following parliament in 1681. The burial of the barons in full armour, and the belief that on the night before the death of any of them the chapel has the appearance of being in flames, have been finely used by Sir Walter Scott in his ballad of *Rosabelle;* and, in Billings' *Baronial and Eccle-*

siastical Antiquities of Scotland, Dr Hill Burton gives a graphic account of such a phenomenon as once seen here by himself. A monument of early date is said to be that of the founder, or, according to others, that of the Sir William who was contemporary with Bruce, and whose hunting exploit has been already noticed. If the latter be the case, it must have been brought here from some older burying-ground, but it is more probable that it is the memorial of the Earl of Caithness who was killed at Flodden. Another monument is in memory of George, Earl of Caithness, who died in 1582. The church was founded in 1450* by Sir William St Clair, the seventh of his name, baron of Roslin and Earl or Prince of Orkney. It was dedicated to St Matthew, and founded for a provost, six prebendaries, and two choristers. 'His adge creeping on him,' says Father Hay, 'to the end that he might not seem altogither unthankfull to God for the benefices he receaved from him, it came in his mind to build a house for God's service, of most curious worke; the which that it might be done with greater glory and splendor, he caused artificers to be brought from other regions and forraigne kingdomes, and caused dayly to be abundance of all kinde of workemen present: as masons, carpenters, smiths, barrowmen, and quarriers, with others. The foundation of this rare worke he caused to be laid in the year of our Lord 1446; and to the end the worke might be the more rare: first he caused the draughts to be drawn upon Eastland boords, and made the carpenters to carve them according to the draughts thereon, and then gave them for patterns to the masons that they might thereby cut the like in stone.' There is a tradition that he procured the designs from Rome, but this, as has been already indicated, does not seem to be the case, and he was probably himself the source of the whole design, while the pains he took to procure good workmen—giving to each mason ten pounds a year, to each master-mason twenty pounds, to both an extent of land proportionate to the ability they displayed, and to other artificers a commensurate extent of compensation and encouragement—attracted to the place all the best workmen in Scotland as well as from parts of the Continent. If he was mainly his own architect, the preference for baronial types is explained by the experience acquired in connection with the castle, and his architectural taste is said to have been the cause of his advancement by James II. to the dignity of Grand Master Mason. He held also other high offices, having been in 1436 Admiral of the Fleet—in which capacity he conveyed the Princess Margaret to France—and from 1454 to 1458 chancellor of the kingdom. The crypt was founded by the earl's first wife, the daughter of the Earl of Douglas. Earl William endowed the new church with a considerable amount of land and various revenues, and spent large sums on the building, but in spite of his great efforts and vast expenditure, even the small portion now remaining seems to have been left unfinished, and to have been carried on and completed by the founder's third son, Sir Oliver St Clair. Many of the succeeding barons made additions to the endowment, and in a grant by Sir William St Clair, in 1523, of some lands in the vicinity for dwelling-houses, gardens, and other accommodation for the provost and prebendaries, mention is made of the four altars already noticed. At the Reformation the lands and revenues belonging to the church were virtually taken away, and, in 1572, they were relinquished by a formal deed of resignation. The chapel does not, however, seem to have suffered much violence till 1688, when a mob did a good deal of mischief. It remained uncared for, and gradually becoming ruinous, till, in the middle of last century, General St Clair glazed the windows, relaid the floor, renewed the roof, and built the wall round about. Further repairs were executed by the first Earl of Rosslyn, and again by the third Earl, who expended £3000 principally in renewing and retouching the carvings of the Lady chapel, a work said to have been suggested by the Queen who visited the chapel 14 Sept. 1842. Since 1862, services in connection with the Scottish Episcopal Church have been held in it every Sunday.

See also the notes to Scott's *Lay of the Last Minstrel*; Father Hay's *Genealogie of the Saint Claires of Rosslyn, including the Chartellary of Rosslyn* (Edinb. 1835, edited by James Maidment); T. S. Muir's *Descriptive Notices of the Ancient Churches of Scotland* (Edinb. 1848); Billings' *Baronial and Ecclesiastical Antiquities of Scotland* (Edinb. 1852); *To Roslin from the Far West* (Edinb. 1872); and Papers by Mr A. Kerr in the *Proceedings of the Society of Antiquaries of Scotland for* 1876-78.

Rosneath, a village and a parish of W Dumbartonshire. The village lies near the western shore of the Gare Loch, where a small triangular promontory projects to within 3 furlongs of the opposite point of Row, 5⅝ miles S by E of Garelochhead, 2⅝ W by N of Helensburgh, and 5 NNW of Greenock. A little place, serving rather as a centre of communication to the sprinkling of residences over miles in the neighbourhood, than as a seat of trade or of any considerable population, it adjoins a convenient quay, where steamers call many times a day; and it has an inn and a post office under Helensburgh, with money order, savings' bank, and telegraph departments.

The parish, containing also the police burgh of Cove and Kilcreggan and the hamlet of Coulport, forms a peninsula, bounded N by Row, E by the Gare Loch, S by the Firth of Clyde, and W and NW by Loch Long. Its utmost length, from N to S, is 7 miles; its breadth varies between 1⅛ and 3¼ miles; and its area is 13⅝ square miles or 8829¼ acres, of which 321 are foreshore, and 37½ water. The main part of its surface is a continuous ridge, which, rising immediately from the shores of the Gare Loch and Loch Long, and extending from the isthmus to within 1 mile of the Firth of Clyde, attains 717 feet at Tamnahara or Cnoc na h-Airidhe, 645 to the E of Peaton, 651 at Clach Mackenny, and 414 at the Gallowhill. The greater part of the ridge is a tableland, waste or pastoral, with swells commanding gorgeous views of the hill-flanks of the Clyde, together with the northern screen of the Gare Loch and the Duke of Argyll's Bowling Green. The southern extremity of the parish is on the whole low, but beautifully variegated, comprising a dingle from side to side, some fine swells and level fields, and the richly wooded grounds of Rosneath Castle, and terminating in a beautiful small point which projects south-eastward into the Firth of Clyde. The coast is partly sandy, partly rocky. The skirts of the slopes along the Gare Loch, and the parts which look southward down the Clyde, are so studded with villas and *cottages ornées*, as to wear a brilliant and embellished aspect. Numerous brooks run down the sides of the ridge, swollen in rainy weather into impetuous torrents, and showing in the lower parts of their course many fine cascades. Campsail or Rosneath Bay in the lower part of the Gare Loch has very beautiful shores, and affords one of the best-sheltered anchorages on the W coast of Scotland. Clay, passing sometimes into chlorite slate or mica slate, is the prevailing rock; but Old Red Sandstone or its conglomerate occurs in the SE. The soil had long a factitious fame for fatality to rats. Nearly 2500 acres are arable ground or artificial pasture; some 1600 acres are under natural or planted wood; and most of the rest is uncultivated moorland. An ancient castle stood near the shore of Campsail Bay, and seems to have served for centuries merely as a place of strength, but was fitted up about the year 1630 by the Marquis of Argyll as a subsidiary residence to the castle of Inveraray. It underwent great changes, and was eventually destroyed by fire in 1802. A new mansion, on a spot at a little distance from the old site, was erected in 1803-5 according to a splendid design by J. Bononi of London. This is the present ducal palace of Rosneath, and forms along with its park a conspicuous feature of the parish, or rather of the general landscape in which the southern part of the parish lies. The edifice, which has

* The date commonly given is 1446, but if Mr Kerr's reading of the above-given inscription on the clerestory wall is right, the correct year must be 1450.

never been finished, is in the modern Italian style, with combinations of Greek. One principal front looks to the N, and is adorned with a magnificent portico, which resembles in its style the Roman Ionic, and projects so far as to admit of a carriage-way within it. Another principal front looks to the S, but is less marked in feature. A circular tower rises in the centre of the edifice, and is crowned by a balustrade, which commands a brilliant panoramic view. Blind Harry and tradition associate the name of the patriot Wallace with Rosneath, but in tales too legendary to admit of discrimination between fact and fiction. A precipitous rock to the N of Rosneath Castle bears the name of Wallace's Leap. Many of the persecuted Covenanters, in the days of the Stuarts, found shelter in the parish under the protection of the friendly Argyll. Respecting even the noted Balfour of Burley, the late Mr Story writes in the *New Statistical Account* that 'there are strong presumptions that he found an asylum in the same peninsula, and that, having assumed the name of Salter, his descendants continued here for several generations.' Among the ministers of Rosneath have been the mathematician, Prof. Matthew Stewart (1717-84), the father of Dugald Stewart; Robert Story (1790-1859); and his son, Robert Herbert Story, D.D. (b. 1835), a leader of the Moderate party. John Anderson, F.R.S. (1726-96), the founder of Anderson's College, Glasgow, was the son of another minister. It may also be noted that the 'picturesque island of Rosneath' is the scene of the closing chapters of the *Heart of Midlothian*. Much has been written as to the etymology of the name *Rosneath*, or *Rosnevyth* according to the old orthography. The first part is clearly the Celtic *ros*, 'a promontory;' and, as to the second, Dr Skene opines that it probably preserves the name of Nevydd, an early bishop in the North, who was slain by the Saxons and Picts. The ancient parish comprehended, besides the peninsula, all the territory which now constitutes Row, the latter having been disjoined in 1635. In the 12th century its church, St Modan's, was a free parsonage, under the patronage of the Earl of Lennox; but, in 1225, it was given, with its pertinents, in perpetual alms to the monks of Paisley; and it continued to be maintained by them as a curacy till the Reformation. The peninsula and the adjacent but disjoined district of the ancient parish, together with a portion of land beyond, formed the country of Nevydd, which was granted at a very early date to the noble family of Lennox, and continued in their possession till the latter part of the 15th century. Part of Nevydd, including most of the peninsula, was, in 1489, bestowed as a royal gift upon Colin, the first Earl of Argyll, and introduced his powerful family by territorial connection to an influence on the western Lowlands. The Duke of Argyll is the chief of 3 heritors. Giving off all the *quoad sacra* parish of Craigrownie and a portion of that of Garelochhead, Rosneath is in the presbytery of Dumbarton and the synod of Glasgow and Ayr; the living, including the value of manse and glebe, is worth about £330. The parish church, built in 1853, is a good Gothic edifice, with nave, chancel, porch, and bell-cote. There is also a Free church of Rosneath; and two public schools, Kilcreggan and Rosneath, with respective accommodation for 176 and 153 children, had (1884) an average attendance of 109 and 90, and grants of £125, 17s. 6d. and £85, 1s. Valuation (1860) £12,221, (1885) £22,044, 17s. 4d. Pop. (1801) 632, (1831) 825, (1861) 1626, (1871) 1780, (1881) 1994, of whom 775 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 30, 29, 37, 38, 1866-76.

Rosque, Loch, or **Loch a Chroisg,** a beautiful lake of Contin parish, Ross-shire, at the boundary with Gairloch parish, 1 mile W by S of Auchnasheen station on the Dingwall and Skye railway, this being 27¾ miles W by S of Dingwall. Lying 508 feet above sea-level, and overhung to the N by Meall a Chaoruinn (2313 feet), it extends 3§ miles east-by-northward; has a maximum breadth of 3¼ furlongs; sends off the Bran towards the Conon; and contains some char and many fine trout.—*Ord. Sur.*, sh. 82, 1882.

Ross. See Burnmouth and Mordington.

Ross, an estate, with a mansion, in Hamilton parish Lanarkshire, between the confluent Avon and Clyde, 1½ mile E by N of the town of Hamilton. Held from the time of Alexander II. till about 1339 by the monks of Kelso, and afterwards by a branch of the Hamiltons, it now belongs to Hugh Henry Robertson-Aikman, Esq. (b. 1819; suc. 1879), who owns 1020 acres in the shire, valued at £1386 per annum.—*Ord. Sur.*, sh. 23, 1865.

Ross, a peninsula in the SW of Mull island, Argyllshire, forming the Kilvickeon section of Kilfinichen parish, and projecting 17¼ miles west-by-southward from the main body of the island. It commences in an isthmus 4½ miles wide, between Loch Buy on the S and the head of Loch Scridain on the N; terminates in a promontory 5½ miles broad, overhanging the Sound of Iona; is pierced, immediately E of the N side of that promontory, by Loch Laithaich; contains the village of Bonessan; and exhibits, in two places, very remarkable cliff coast scenery, noticed in our articles on Ardtun and Carsaig.

Ross. See Borgue.

Ross or **Dingwall Castle.** See Dingwall.

Ross. See Ross-shire.

Rossdhu (Gael. *ros-dubh*, 'dark headland'), the seat of Sir James Colquhoun, Bart., in Luss parish, Dumbartonshire, on a small promontory of its own name, on the W side of Loch Lomond, 3¼ miles S of Luss village. A handsome edifice, built about 1774, it stands near remains of an older tower, and a roofless chapel used as the family burying-place; and has beautiful wooded grounds, partly extending along the lake's shore, partly ascending Creachan Hill and Tom-na-Cona, and partly including islands in the lake. On 29 Sept. 1875 the Queen 'drove up to the house, and, without getting out of the carriage, received a nosegay from Sir J. Colquhoun's little girl and a basket of fruit.' The estate belonged anciently to the Earls of Lennox; was given, about the beginning of the 12th century, to the Dean of Lennox; and went by marriage, in the reign of Robert Bruce, or the early part of the 14th century, to Sir Robert de Colquhoun, whose nineteenth lineal descendant, Sir James Colquhoun, twelfth Bart. since 1625 (b. 1844; suc. 1873), holds 67,041 acres in the shire, valued at £12,846 per annum.—*Ord. Sur.*, sh. 38, 1871. See also Inchmurrin; Fruin Water; Lomond, Loch; and Dr Wm. Fraser's *The Chiefs of Colquhoun and their Country* (2 vols., Edinb. 1869).

Rossend Castle. See Burntisland.

Rossie, a plain oblong mansion, with a large old-fashioned garden and well-wooded policies, in Forgandenny parish, Perthshire, immediately W of Forgandenny village, and 3½ miles W of Bridge of Earn. The estate of Rossie Hill or Rossie Ochil, 4¼ miles due S, was purchased from Andrew Blair in 1583 by William Oliphant of Newtoun, whose descendant, Robert, in 1727 added part of the charter lands of Forgandenny; and the present proprietor, Thomas Truman Oliphant, Esq. (b. 1839; suc. 1872), holds 1800 acres in the shire, valued at £1742 per annum.—*Ord. Sur.*, shs. 48, 40, 1868-67. See chap. xiv. of Thos. Hunter's *Woods and Estates of Perthshire* (Perth, 1883).

Rossie Castle, a mansion of 1800 in Craig parish, Forfarshire, 1½ mile SSW of Montrose. It belongs to Mr Macdonald of St Martins. See Inchbrayock.—*Ord. Sur.*, sh. 57, 1868.

Rossie House, a mansion in the W of Collessie parish, Fife, 1§ mile E by N of Auchtermuchty. Rossie Loch, once the largest sheet of water in the county, abounding in perch and pike, was partially drained in 1740, but only so as to be marshy in summer and almost covered with water in the winter. In 1805-6, however, it was better drained, by means of deepened and extended ducts toward the Eden, at a cost of £3000; and it then left 250 acres capable of productive tillage, and 40 more so far marshy as to yield natural hay.—*Ord. Sur.*, sh. 40, 1867.

Rossie Priory, the princely seat of Lord Kinnaird in Inchture parish, E Perthshire, 3§ miles N of Inchture station, this being 7§ miles WSW of Dundee. Stand-

ing 132 feet above sea-level, on the south-eastern slope of Rossie Hill (567 feet), it commands an extensive and very brilliant view; succeeded a previous mansion, called Drimmie House, within the limits of Longforgan parish; and was erected in 1807-17, from designs by Mr Atkinson, by the eighth Lord Kinnaird. It is a superb monastic-looking pile, spacious and elegant within, and of imposing aspect without; contains a valuable collection of antiquities, chiefly Roman; and has pleasure-grounds, gardens, and policies of great extent and singular beauty. The barony of Kinnaird in the Gowrie district was conferred in 1170 on Radulphus Rufus, whose descendant, Reginald de Kinnaird, in 1399 acquired the lands of Inchture through marriage with Marjory, daughter and heiress of Sir John Kirkaldy. Their descendant, George-Patrick Kinnaird, for his loyalty to the house of Stuart was knighted by Charles II. in 1661, and raised to the Scottish peerage in 1682 as Baron Kinnaird of Inchture. The Hon. Douglas James William Kinnaird (1788-1830) was an eminent banker, the friend of Byron and Sheridan. Arthur Fitzgerald Kinnaird, present and tenth Lord (b. 1814; suc. 1878), was Liberal M.P. for Perth 1837-39 and 1852-78. He holds 7579 acres in the shire, valued at £15,460 per annum.—*Ord. Sur.*, sh. 48, 1868.

Rossie, Wester, a small village on the western verge of Collessie parish, Fife, 1¼ mile ENE of Auchtermuchty.

Rosskeen (Gael. *ros-ceann*, 'promontory of the head'), a coast parish of NE Ross-shire, containing the seaport and station of Invergordon, 12⅝ miles NE of Dingwall and 12¾ SSW of Tain. It also contains the Bridgend portion and the station of Alness village, 2¾ miles W by N of Invergordon. Washed on the SE for 5⅝ miles by the Cromarty Firth, it is bounded by Kincardine around its north-western extremity, and along its north-eastern side by Edderton and Kilmuir-Easter, along its south-western side by Alness. Its utmost length, from NW to SE, is 17⅜ miles; its breadth varies between 1½ and 6⅝ miles; and its area is 55¼ square miles or 34,384⅜ acres, of which 501⅞ are foreshore, 152⅜ water, and 5 tidal water. From a point 3⅝ miles below its efflux from Loch Morie, the river Alness flows 8½ miles south-south-eastward to the Cromarty Firth along the Alness boundary; and at that point, 495 feet above sea-level, it is joined by the Black Water, which, rising at an altitude of 1700 feet, runs 9¼ miles south-eastward down Strath Rusdale through the north-western interior. Lochan Chairn (3⅛ × 1⅜ furl.; 1329 feet) and Loch Chuinneag (2¾ × 1⅛ furl.; 1680 feet), in the north-western extremity of the parish, near the source of the Black Water, send off their superfluence north-north-westward to the river Carron; and the Strathrory or Balnagowan river, rising on Beinn Tharsuinn at an altitude of 1980 feet, runs 4⅛ miles south-eastward through Rosskeen till it passes off into Kilmuir-Easter. Loch Achnadoich (2 × 1 furl.; 395 feet), 4½ miles N by E of Alness village, is a beautiful little lake. The shore is low; and S of the highroad the surface nowhere exceeds 72 feet above sea-level. Beyond, it rises to 700 feet at Cnoc Navie, 1301 at *Cnoc Corr Guinig, 1000 at Cnoc Strathy, 2158 at Cnoc an t-Sithein Mor, 2259 at Beinn Tharsuinn, 1978 at *Carn nan Gabhar, 1744 at *Meall Bhenneit, and 2114 at Carn an Lochan, where asterisks mark those summits that culminate on the confines of the parish. Old Red Sandstone, the prevailing rock of the lowlands of the parish, has been quarried for building purposes. The soil of the coast district is partly gravelly and light, partly loam, and partly a deep strong clay; in the middle district, or higher arable land, it was formerly light and spongy, but has been worked into a rich deep loam. Little more than one-ninth of the entire area is in tillage; about one-twelfth is under wood, the middle district being finely wooded; and nearly all the remainder is pastoral or waste. A standing-stone near the church and a number of cairns are the chief antiquities. William Macintosh (1738-1809), the Eastern traveller, was born at Newmore, as also was George, his younger brother, who introduced Turkey-red dyeing to Scotland, and whose son, Charles, F.R.S. (1766-1843), invented 'macintosh' waterproofs. Mansions, noticed separately, are Ardross Castle, Invergordon Castle, and Newmore; and of 4 proprietors, 2 hold each an annual value of more than £3350. Rosskeen is in the presbytery of Tain and the synod of Ross; the living is worth £385. The churches, Established and Free, are described under Invergordon. Five public schools—Ardross, Bridgend, Invergordon, Newmore, and Saltburn—with respective accommodation for 111, 205, 205, 107, and 90 children, had (1884) an average attendance of 60, „ , 165, 58, and 42, and grants of £41, 13s. 4d., £ „ , £138, £38, 10s., and £26, 14s. 2d. Valuation (1860) £10,171, (1885) £15,353, 6s. 11d. *plus* £1754 for railway. Pop. (1801) 2074, (1831) 2916, (1861) 3766, (1871) 3808, (1881) 3773, of whom 1119 were in Invergordon and 718 in Bridgend, whilst 1272 were Gaelic-speaking.—*Ord. Sur.*, shs. 94, 93, 1878-81.

Ross, Little. See Little Ross.

Rosslyn. See Roslin.

Ross of Mull. See Ross.

Ross Priory, a mansion in Kilmaronock parish, Dumbartonshire, on the SE shore of Loch Lomond, 4½ miles NNE of Balloch station. Considerably enlarged about the year 1810, it has beautifully wooded grounds, and was much frequented by Sir Walter Scott in 1817 while he was writing *Rob Roy*. The estate—1778 acres of £1416 annual value—has come, through his mother, to Sir George Hector Leith-Buchanan, Bart. See Drygrange.—*Ord. Sur.*, sh. 38, 1871.

Ross-shire, a great northern Highland county extending across Scotland from the E coast along the upper reaches of the Moray Firth, to the Atlantic on the W coast, beyond the island of Lewis in the Outer Hebrides. The mainland portion of the county includes the whole of the sections of the scattered county of Cromarty, which may indeed be treated as but an integral part of it, and also the detached Ferintosh district of Nairnshire. The island portion consists of the whole of the N part of the island of Lewis, and a number of smaller islets on the coast of Lewis, as well as on the coast of the mainland portion of the county. The boundary line is treated as taking in all the portions of Cromarty, and the particular positions of the larger sections of the smaller county are subsequently described with more minuteness. Ross-shire is bounded N by E by Sutherlandshire and the Dornoch Firth, E by the Moray Firth, SE and S by Inverness-shire, and W by the Atlantic Ocean. The shape is irregular, but the outline of the mainland portion is roughly fan-shaped, and the part of Lewis is somewhat like the head and snout of a great sea-monster of which the rest of the Outer Hebrides form the shattered remnants of the body. The extreme breadth of the mainland portion from Rudh' Re—at the NW corner of the peninsula, between Gair Loch and Loch Ewe—E by N to the extreme point of Tarbet Ness at the entrance to the Dornoch Firth, is 74¾ miles; and the length, from the source of the Oykell on the N to the S side of the upper end of Glen Shiel on the S, is 66¾ miles. From the island part the mainland is separated by the Minch, 24 miles across the narrowest part, and from the W coast of Lewis, ESE to Tarbet Ness, is 125 miles; while from the Butt of Lewis, SSE to the upper end of Glen Shiel, is 106 miles. It is the third largest county in Scotland, the total land area, inclusive of Cromarty, being 3129·8 square miles or 2,003,065 acres. Exclusive of Cromarty the area of Ross proper is 1,861,571·699 acres, of which 1,768,559·853 are land, 64,406·345 are water, 27,454·091 are foreshore, and 1151·410 are tidal water. Of this area there are in the islands 437,221·438 acres, of which 402,166·473 acres are land, 26,862·856 are water, and 14,641·792 are foreshore, while 417,458 acres, including foreshore and water, are in the part in the Hebrides. Of the enormous total of 2,003,065 acres, however, only 134,298—or 6·7 per cent.—acres were in 1883 under crop, bare fallow, and grass, and 43,201—slightly over 2 per cent.—under planted wood, the rest being natural

wood, rough hill grazing, heath, peat, or stony waste. The county is the third least densely populated in Scotland, there being only 25 persons to the square mile. There are 11 inhabited islands, with a population of 25,712. Third of the counties of Scotland as regards area, Ross is eleventh as regards population, and seventeenth as regards valuation.

Starting at the extreme NW corner of the mainland portion at Loch Kirkaig between Loch Inver and Enard Bay, the boundary line passes up the river Kirkaig to Fionn Loch (357 feet); up the centre of this, along the connecting stream, to Loch Veyatie (366); and up the stream flowing into the upper end of this as far as the bend above the small Lochan Fhionnlaidh, where it takes to the ridge of the Cromalt Hills, along the watershed of which it runs by Meall Coir an Lochain (1692) and Meall a Bhuirich (1500) to Meall a Bhuirich Rapaig (1500). From this it turns northward by Meall Chaomuinn (1491 feet) and Cnoc nan Imirean to the SE end of Loch Borrolan (460), at the mouth of Allt an Loin Dhuibh, thence across the loch to the mouth of the burn that enters the N side near Aultnacallagach Inn, up this burn to Lochan Sgeireach, curves irregularly to Luban Croma, and follows to the source the stream that rises in the hollow between the highest top of Breabag (2670) and Sgonnan Mor (2028), whence it strikes up Breabag, passes to the E of the summit near the 2500 contour, and then passes along the N shoulder of the hill (2338), until, in the hollow between Breabag and Ben More Assynt, it reaches the source of the Oykell, and from this point it turns to the S and then to the E, following the river all the way to the Dornoch Firth at Bonar-Bridge, and at Loch Alsh (498) and Kyle of Sutherland passing through the centres of these sheets of water. At the mouth of Glen Einig at Oykell Bridge the line is only 8 miles E of the top of Meall a Bhuirich Rapaig, where it turns to the N, though between the points following the boundary the distance is 24 miles round the long narrow finger-like portion that projects up to Ben More Assynt. From Bonar-Bridge the line passes eastward along the S shore of the Dornoch Firth, then south-westward along the NW shore of the Moray Firth, and thereafter westward along the N shore of the Beauly Firth, till, 2 miles below Beauly, it once more takes to the land on the N side of the river Beauly. From this it curves north-westward to Muir of Ord station, then, by an irregular zig-zag, back to Tomich, midway between Beauly and Muir of Ord stations, whence it passes irregularly westward till it reaches the Allt Goibhre—a tributary of the Orrin—up which it passes through Glen Gowrie to An Gorm-loch (1774 feet), and thence southward to the summit of Carn nam Pollan (2778). It then strikes south-westward and then westward by the Allt na Criche back to the Orrin, which it follows upward for over 3 miles before it quits it again and turns southward by Sgurr na Cairbhe to the summit of Sgurr Ruadh (3254 feet). Here it turns westward along the top of the ridge by Sgorr a' choir ghlais (3552 feet) to Sgurr Fhuar-Thuill (3439), thence westward by Sgurr na Muice (2915) and Beinn na Muice (2272), till, 1 mile below Loch Monar (663), it reaches the Garbh nisge, up which it proceeds, and then up the loch till, somewhat over a mile from the W end, it strikes southward along a burn to the W of Aultfearn, and then by Meall an Buidhe (1819) to the eastern shoulder of An Riabhachan (3898), thence eastward along the ridge to the top of Sgurr na Lapaich, south-eastward down to the N end of Loch Tuill Bhearnach, which lies here in a corry, and thence down the glen to Loch Mullardoch (705), near the centre of the northern shore. Crossing the loch in a south-westerly direction for ⅝ mile, it reaches the southern shore, and, striking up the hollow between Tuill Creagach (3452 feet, Inverness) and Tom a Choinich (3646), passes up to the summit of the latter, and thence along the ridge to the top of Carn Eige (3877), and then to Mam Soul (3862), and from this continues south-westward along the watershed between the upper end of Glen Affrick and Glen Clunie by Sgurr nan Ceathreamhnan (3771), Ben Attow (3383), Sgurr a Bhealaich Dheirg (3378), Carn Fuaralach (3241), and Ciste Dhubh (3218), reaches Garbh Leac (3673), just beyond which the watershed begins between Glen Affrick and Glen Morriston. The line crosses this watershed to the top of Sgurr nan Conbhairean (3632 feet), and thence by Carn Ghluasaid to Loch Clunie (606), the northern shore of which is reached 1½ mile from the W end. Crossing Loch Clunie at right angles, and then the highest point of Druim nan Cnaimh and so down to lower Loch Loyne (700 feet)—which it reaches about ½ mile from the upper end—it passes up Loch Loyne and the intervening river to upper Loch Loyne, and then up the river Loyne till near the source, where it turns off first N and then W to the summit of Aonachair Chrith (3342), and from this follows the watershed westward, first between Glen Clunie and Glen Quoich, then between Glen Shiel and Loch Hourn, and then between Loch Duich and Loch Alsh, and Glenelg for a distance of 22 miles along a ridge with an average height of about 3000 feet, and reaches the sea at Kyle Rhea, ½ mile from the northern end. From this it passes across the opening of Loch Alsh, through Kyleakin, between Longay and the Crowlin islands, up the Inner Sound between Raasay and the mainland; strikes north-westward across the Minch and up Loch Seaforth (Lewis); curves across Lewis and Harris to Loch Resort, and thence round the W and N of Lewis, and back across the Minch to the starting point at Kirkaig. The island district is separately treated under Lewis, and except for statistics what follows is chiefly confined to the mainland part of the county.

Districts and Surface.—The Moray Firth coast from Tarbet Ness to Craigton Point near Kessock measures in a straight line about 30 miles. Fourteen miles from Tarbet Ness it is indented by the Cromarty Firth, and 11½ miles farther to the SW by Munlochy Bay, while along the S coast the Beauly Firth extends for 7 miles W of Craigton Point. Along the curve of the W coast the distance is probably about 75 miles, but if the windings of the coast be followed the length will be about 400 miles, so much is the line broken up by sea-lochs, some of them of large size. The chief in order from the N end, most of which are separately noticed, are Enard Bay, Loch Broom, Little Loch Broom, Gruinard Bay, Loch Ewe, Gair Loch, Loch Torridon branching off into Upper Loch Torridon and Loch Shieldaig, Loch Carron branching off into Loch Kishorn and Upper Loch Carron, and Loch Alsh branching off into Loch Long and Loch Duich. The county may roughly be divided into three great divisions, Easter Ross, Mid Ross, and Wester Ross. The first is one of the finest agricultural districts in Scotland, and may be taken as including all the low ground on the E coast lying between the Dornoch and Cromarty Firths. Mid Ross includes all the land lying between the Cromarty, Moray, and Beauly Firths, and known as Ardmeanach or the Black Isle; and the adjoining parishes of Urray, Contin, Dingwall, Fodderty, Kiltearn, and Alness, and these embrace the minor district of Strathpeffer and the lower parts of Strath Conan and Glen Orrin. Wester Ross, including by far the greater portion of the county, occupies all the districts to the W of this, and contains the minor divisions of Strath Oykell in the N, with Glen Einig opening off it, and the lesser hollows of Strath Carron, Strath Chuilionaich, and Gleann Mor near by; Coigach in the extreme NW of the county N of the outer part of Loch Broom; Loch Broom, with Strath Kanaird and Glen Achallt opening off from the loch, and, at its upper end, Strath More, which passes SE into Dirrie More, leading across to Strath Garve; Gruinard all round the head of Gruinard Bay between Little Loch Broom and Loch Maree and the lesser district of Rudha Mor to the W of Gruinard Bay; Gairloch, between Loch Maree, Gair Loch, and Loch Torridon; Applecross—the triangular peninsula between Lochs Torridon and Shieldaig and Lochs Carron and Kishorn; the Aird, between Loch Kishorn and Upper Loch Carron; Glen

Carron, upwards from Upper Loch Carron; Lochalsh, between Loch Carron and Loch Alsh, and at the upper end of the latter, Glen Ling and Glen Elchaig; Kintail, ESE of Loch Alsh; Glen Shiel, up from the top of Loch Duich and passing over the watershed into the hollow of Glen Clunie, which passes downwards into Glen Morriston (Inverness-shire); the upper parts of Glen Orrin and Strath Conan. Near the centre of the N side of Strath Conan the hollow occupied by Loch Luichart branches off to the NW to Strath Bran, which continues westward to Auchnasheen, where it forks, one branch passing south-westward to Glen Carron, and the other westward and south-westward by the hollow of Loch a Chroisg (Rosque) and Glen Docherty, to Kinlochewe and Loch Maree. From the NW end of Loch Luichart the hollow of Strath Bran is continued eastward towards Strathpeffer, and from the N side Strath Garve passes off and is continued northward by Strath Vaich to Gleann Mor, and so to Strath Oykell; and north-westward by Dirrie More to Strath More and Loch Broom. Easter Ross is almost entirely lowland in its character, consisting nearly altogether of a fertile and well-cultivated plain, but rising along the coast of the Moray Firth into a ridge with lofty cliffs facing the sea. Mid Ross is also mostly well cultivated, but consists of a greater portion of uplands, and rises along the shore of the Moray Firth into the long ridge of Ardmeanach. The western division has a very unequal surface, its ruggedness being scarcely surpassed even by Inverness-shire, $\frac{4}{5}$ of the whole area being over 1000 feet above sea-level. The mountain tops rising above this can hardly be said to form distinct chains or ranges, but occur as single isolated summits or in groups. In Coigach, between Loch Veyatie and the outer part of Loch Broom, are Cul Mor (2786 feet), Cul Beag (2523), An Stac (2009), Beinn Eun (1973, Sgorr Deas), and Ben More Coigach (2438). The summits in the Cromalt Hills N of the upper part of Strath Kanaird have been noticed in connection with the boundary, except Meall an Fhuarain (1895 feet); between Glen Oykell and Strath Carron are Beinn Ulamhie (1616), Meall Deargaidh (1659), and Breac Bheinn (1520); and between Strath Kanaird and Glen Achallt are Na Dromannan (1337), Cnoc a Choilich (1336), Meall Liath Choire (1798), Cnoc an Daimh (1500). Between Glen Einig and Gleann Mor are the hills in Freevater Forest, of which the highest point is Sean a Bhraigh (3000 feet)—between the upper waters of the Douchary, which flows down Glen Douchary to Glen Achallt, and the upper waters of Corriemulzie Burn, which flows by Strath Mulzie to Glen Einig—and from this a spur passes off to the NW with Meall nam Bradhan (2221). To the E of Sean a Bhraigh is Carn Ban (2762 feet), and NE of that Bodach Mor (2689) and Bodach Beag (2500); and a shoulder runs away to the eastward with the highest points at An Socach (2424) and Srongun Aran (2138), 4 miles N of which is Carn a Choin Deirg (2302) overlooking Strath Chuilionaich. To the SW of Carn Ban is Carn Loch Sruban Mora (2406 feet), overlooking Gleann Beag, a continuation westward of Gleann Mor. To the SW of Sean a Bhraigh is a great mass of hills occupying the district between Glen Achallt on the N, Upper Loch Broom and Strath More on the WSW, Dirrie More and Glascarnoch river (Upper Strath Garve) on the S, and Strath Vaich and the upper ends of Gleann Beag and Glen Douchary on the ENE. Of these the highest points, SSW from Sean a Bhraigh, are Eididh nan Clach Geala (3039 feet) and Beinn Dearg (3547), and from Eididh nan Clach Geala a ridge is sent off NW towards Ullapool, where Glen Achallt opens on to Loch Broom, the highest points being Carn Mor (2122), Meall Dubh (2105), and Beinn Eilideach (1830) overlooking Ullapool. To the WSW of Beinn Dearg and E of the upper end of Strath More are Beinn Aonaclair (2915 feet) and Meall Doire Faid (2390), while to the E the highest point of the lumpy mountain that overlooks Strath Vaich is 3120 feet, and it slopes towards Glascarnoch river by Tom Ban Mor (2433) and Meall an Torcain

(1735). In the great lozenge-shaped district bounded on the N by the sea; on the NE by the line of Loch Broom, Strath More, Dirrie More, Glascarnoch river, and Strath Garve; on the S by Strath Bran and the hollow of Loch a Chroisg (Rosque); and on the SW by Glen Docherty, Loch Maree, and Loch Ewe,—the hills may be grouped roughly into three divisions, of which the second and third may be regarded as forming somewhat broken ranges. The first division is bounded by Loch Broom and Strathmore on the NE side, by Gleann Mor (a branch of Strath More passing to the SW) and the hollow of Loch a Bhraoin (Vruin) on the SE, and the upper part of Strath na Sheallag and the valley of Loch na Sheallag and Gruinard river to Gruinard Bay on the SW. The NW end is indented by the long, narrow Little Loch Broom. The whole mass is somewhat like a lobster's pincer, Little Loch Broom being the opening of the claw. Beginning to the S of Annat Bay on the point stretching out between Loch Broom and Little Loch Broom, there is the isolated mass with the tops of Beinn Ghobhlach (Goleach; 2082 feet) and Cnoc a Bhaid-rallaich (1780); farther to the SE is Cnoc an Droighinn (1327), Creag Chorcurrach (1193), Carn a Bhibrain (1665), and Carn Bhreabadair (1573)—the last three round the end of Strath Beg at the head of Little Loch Broom. Between Strath Beg and Loch na Sheallag is the lumpy mass of An Teallach, with a northern spur, Mac us Mathair (2298 feet), a central summit (3483), and Sgurr Ruadh (2493), and Sgurr Fiona (3474) overlooking Loch na Sheallag. To the NW of this are Sail Mhor (2508 feet) and Carn nam Buailtean (1283), while to the SE are Meall a Bhainne (1503) and Carn nam Feithean (1820)—to the NE and SW of the upper hollow of Strathbeg river—Carn Breac Beag (1267) overlooking the top of Strath More, and in a triangular projection to the SW between the hollow of Loch a Bhraoin and the southward prolongation of Strath na Sheallag, Meall an t' Sithe (1871), and Creag Ralnich (2646). The second division begins to the S of Loch na Sheallag, and extends south-eastward till opposite Creag Ralnich, where it becomes very narrow, and then turning to the E stretches eastward to the valley of Strath Garve, attaining its greatest breadth (over 7 miles) and greatest height between Glen More on the N and Loch Fannich on the S. The hollow on the SW is occupied by the basins of Fionn Loch and Lochan Fada, and on the S by that of Loch Fannich. Beginning at the NW end, the highest summits are Beinn a Chaisgein Beag (2234 feet), Beinn a' Chaisgein Mor (2802)—above Fionn Loch—Beinn Dearg Beag (2500), and Beinn Dearg Mhor (2974) S of Loch na Sheallag; Beinn a' Chlaidheimh (2750), Sgurr Ban (3194), Mullach Coire Mhic Fhearchair (3250), and Beinn Tharsuinn (2750) between Strath na Sheallag and Lochan Fada. To the S of Creag Ralnich are Beinn Beag (2000 feet) and An Groban (2424) at the narrowest part of the range, which here turns to the E. In this eastward portion the summits are A' Chailleach (3276 feet), Sgurr Bhreac (3000), Beinn nan Ramh (2333), Sgurr nan Clach Geala (3500), Meall a' Chrasgaidh (3062), Carn na Criche (3000), Sgurr Mòr (3637), Beinn Liath Mhor Fannaich (3000), Beinn Liath Beag (2175), Meall an Rairigidh (3109), An Coileachan (3015), Beinn Liath Mhor a Ghinbhais Li (2484), Beinn Dearg (2230), Beinn Liath Beag (1967), Meall Mhic-Iomhair (1984), Beinn a Bhric (1441), Beinn nan Cabag (1544), Carn na dubh Choille (1570), and Creagan an Eich Ghlais (1086), the last two on the W side of Strath Garve. The third range begins at the N end of the NE side of Loch Maree, extends up the whole of that side and up the NE side of Glen Docherty, at the top of which it turns eastward, extending as far as the glen by which the river Fannich flows to the Bran. Beginning at the NW end the principal summits are Beinn Airidh a' Char (2593 feet), Meall Mheinnidh (2000), Beinn Lair (2817), Beinn Slioch (3217) and its eastern shoulder Sgurr an Tuill Bhain (3058), Beinn a Mhuinidh (2231), Carn a Ghlinne (1770) overlooking Glen Docherty, Fionn Bheinn (3060) with a south-western shoulder Meall a' Chaoruinn (2313), a southern shoulder Creagan nan

Laoigh (2101), and a south-eastern shoulder Dos Mhucarain (1358), Carn Daraith (1521), An Cabar (1831), and Carn na Beiste (1661), the last on the SW of the river Fannich. At the SE end of Loch Maree, between Ben Slioch and Beinn a' Mhuinidh, the range is deeply cut by Gleann Bianasdail, through which the Fhasaigh Water flows from Lochan Fada to Loch Maree, and again opposite the lower end of Glen Docherty by the hollow of the Bruachaig Water, the central portion of which is only 239 feet above sea-level. The portion to the E of this is, from the central summit, often spoken of as the Fionn Bheinn range.

The promontory between Loch Ewe and Gair Loch is occupied by a low undulating ridge, which nowhere rises above 1000 feet, the highest points being An Cuaidh (971 feet) and Cnoc Breac (962). The portion between the head of Gair Loch and the NW end of Loch Maree rises higher, reaching at many places a height of over 1200 feet; 1357 at Meall an Spardain, 1381 at Meall an Doirein, and 1256 at An Groban, E of Gairloch. In the district between Loch Maree, the hollow SW of Kinlochewe, Glen Torridon, Upper Loch Torridon, and Loch Torridon is a curious circular group spreading out from the central Beinn Dearg, the surrounding summits being cut off by hollows radiating out from that hill like the spokes of a wheel. Beinn Dearg itself is 2995 feet; NNE is Beinn a' Chearcail (2576), with a northern shoulder Coinneachadh Beag (1830); E is Beinn Eighe, with a north-western point Ruadh-stac Mhor (3309), a western summit Sail Mhor (3217), an eastern summit Sgurr Ban (3188), and a northern shoulder (2882); S is Liathach, overlooking Glen Torridon and the head of Upper Loch Torridon, and with a central summit Mullach an Rathain (3358), an eastern shoulder Spidean an a' Choire Liath (3456), and a western shoulder Sgorr a Chadail (2287); W is Beinn Alligin with a northern top (3232), a southern (3021), a western shoulder An Ruadh-mheallan (2196), and a north-western shoulder Beinn Bhreac (2031); NW is Busbheinn (2869); and NNW is Beinn an Eoin (2801). In the triangular projection between Loch Torridon, Loch Shieldaig, Glen Shieldaig, Glen Kishorn, Loch Kishorn, Loch Carron, and the Inner Sound, the summits to the NW of the glen that extends north-eastward from Applecross Bay are An Garbh-mheall (1615 feet), Croic-bheinn (1618), Meall na h-Uaidne (1701), and Meall an Fhireachan (2051). To the SE of the glen is the straggling Beinn Bhan (2936 feet), with Carn Dearg (2119) to the W, and Creag Ghorm (1945), Sgorr na Caorach (2539), and Meall Gorm (2325). To the NE is An Staonach (1682 feet), overlooking Glen Shieldaig; and to the N, on the opposite side of the glen, is the ridge of Ben Shieldaig (1500). To the E of this an irregular and much broken range stretches eastward to the upper end of Strath Bran, at the E end of Loch a Chroisg. The summits from W to E, beginning at Loch Damh to the E of Ben Shieldaig, are Creag Sgorach (2251 feet), Beinn Damh (2958), Meall na Saobhaidhe (1207), Beinn na h-Eaglaise (2410), Sgurr Dubh (2566), Beinn Liath Mhor (3034), Sgurr Ruadh (3141), Fuar Tholl (2968)—the last four between the upper part of Glen Torridon and Auchnashellach in Glen Carron—Carn Breac (2220), Beinn na Feusaige (2000), Carn Beag (1806), and the eastern shoulder of the range (1561). To the SW of Sgurr Ruadh an outlying spur of this range passes away down to the promontory between Loch Kishorn and Loch Carron, the highest points being, from NE to SW, Meall a Chinn Deirg (3060 feet), An Ruadh Stac (2919), Sgorr a Gharaidh (2396), Glas Bheinn (2330), An Sgorr (1282), and Bad a Chreamba (1293), the last two being N of Strome Castle.

To the SE of these, beyond the line of Glen Carron and Strath Bran, are a series of broken ranges extending from NE to SW or from E to W. Following first the line to the SE of the two great hollows just mentioned: to the W of Strome Ferry is Creag Mhaol (600 feet); between Strome Ferry and Loch Alsh are Beinn Raimh (1466) and Kirkton Hill (1481); and along the NW shore of Loch Long are Creag an Earbaill (1273) and farther E (1484) and Carn nan Onaich (1100). To the

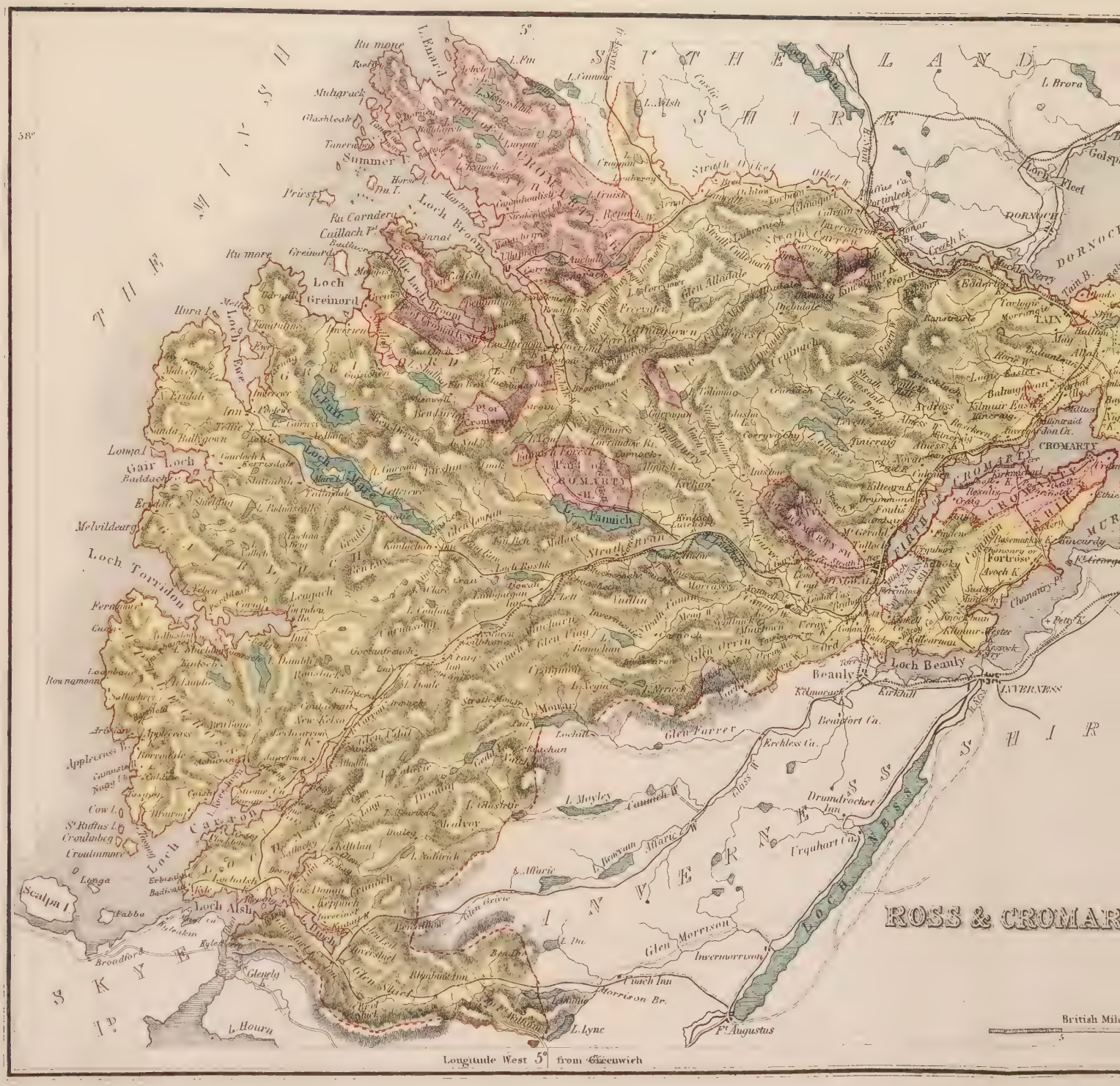
N of these towards Loch Carron are Carn nan Iomairean (1590 feet) and Carn Allt na Bradh (1085); and following the line of heights east-north-eastward the summits are Meall Ruadh (1476), Carn Geur-aodainn (1950), Craig a' Chaoruinn Eagan (2200), Sgurr na Fiantaig (2830)—SE of Auchnashellach—Sgurr na Ceannaichean (2750), Moruisg (3026), with eastern shoulders Carn Gorm (2866) and Carn Liath (2813); Cnoc an t' Sithein (1218), Carn Mhartuinn (1765), Leanuidh (1841), Creag Ghlas (1895), Meall na Faochaig (2231), Sgurr a Mhuilinn (Vuillin; 2750), with Sgurr a Ghlas Leathaid (2778) and Carn na Feith-rabhain (1437) to the NW, and Creag Ruadh (2388) to the SE; Carn na Cre (1514), Meall Bhad Ghaineamhaich (1650), Creag Loch nan Dearcag (1760), and Sgurr Mairc Suidhe (1899) SW of Loch Luichart. On the opposite side of Loch Luichart, opposite Garve station, is Cnoc na h-Iolaire (1153 feet), and farther S Carn Faire nan Con (1210) and Creag a Chaoruinn (1078). From Moruisg eastward the southern boundary of this range is marked first by Glen Fhiodhaig (Evaig) and then by the valley of the river Meig and the upper part of Strath Conan. From Sgurr na Fiantaig a branch goes off to the S of Glen Fhiodhaig, and dividing at the top of Glen Orrin sends offshoots down each side of that glen, the principal summits being Sgurr Choinnich (3260 feet), Sgurr a' Chaoruinn (3452), Bidean an Eoin Deirg (3430), Maoile Lunndaidh (3294), Creag Dhubh Mhor Maoile Choillmas (1653), overlooking Loch Monar, and An Sithean (2661), where the range divides. The tops N of Glen Orrin are Sgurr Coire nan Eun (2581 feet), Bac an Eich (2791), Beinn Mheadhoin (Vane; 2098), Meall Guibhais (2171), Creag Ghaineamhach (1902), Carn Uilleim (2208), Meall nan Damh (2199), Carn na Cloiche Moire (1936), Carn Sgolbaidh (1342), Sron nan Saobhaidh (1339), and Beinn an Rudha Riabhaich (1497); to the S of Glen Orrin is Carn Eiteige (2891) and the summits about Sgurr Fhuar Thuill already mentioned in describing the boundaries; while farther E in the same range is Sgurr a Chlaisean (2383), a northern shoulder of Carn nam Pollan. To the S of Sgurr na Lapaich on the boundary N of the top of Glen Cannich are Braigh a Choire Bhig (3303 feet) and Mullach a Ghlas Thuill (2591); to the W of the same hill is An Riabhachan, with two tops (3896 E; 3526 W), and An Cruachan (2312) and Beinn Bheag (2030) to the N; and farther W still to the N of Glen Elchaig are An Creachal Beag (2854), Aonach Buidhe (2949), Am Fitheach (2847), Sguman Coinntich (2881), and Ben Killilan (2466). From Am Fitheach the heights of Carn na Sean-luibe (1903 feet), Beinn Dronnaig (2612), Lurg Mhor (3234), Bidein a Choire Sheasgaich (3000), and Beinn Tharsuinn (2807) lead northward, and connect this group with Sgurr Choinnich. The heights to the S of Glen Shiel and Glen Clunie have been already noticed in dealing with the boundary. To the N of Loch Duich and Glen Shiel are Creag Reidh Raineach (1654 feet), Sgurr an Airgid (2757)—N of Kintail church—Sgurr na Moraich (2870)—at the head of Loch Duich—and Beinn Mhor, with the two tops Sgurr Fhuaran (Ouran; 3505 NW) and Sgurr na Ciste Duibhe (3370 SE), the latter being connected with Sgurr a' Bhealaich Deirg already mentioned on the boundary. Between Loch Dhuich and Glen Elchaig, NE of Creag Reidh Raineach, are Boc More (2064 feet), Carn Bad a Chreamha (2073), and Carn Loch nan Eun (1946). To the WNW of the last is Beinn a Mheadhoin (1351 feet), and to the SE Carn an Cruineachd. To the N of Ben Attow on the boundary is A'Ghlas-bheinn (3006 feet), and N of Carn Eige is Beinn Fhionnlaidh (3294). In the rest of the county the principal heights are simply scattered about without much regard to grouping, except to the E of Strath Garve, between which and the upper reaches of the Cromarty Firth is the huge bulk of Ben Wyvis (3429 feet) and the subsidiary heights around An Socach (3295 E), An Cabar (3106 S), and Little Wyvis (2497 W). From Ben Wyvis an undulating series of heights of from 1000 to 2800 feet leads away northward to Strath Oykell, a few of the principal hills being

Creachan nan Sgadan (2147 feet), Beinn nan Eun (2436), Creag Ruadh (2194), Beinn a' Chaisteil (2500), Beinn Tharsuinn (2330), Carn Feur-lochain (2243), and Dun an Liath (2246)—the last four being ranged along the upper part of Strath Vaich and Gleann Mor. To the NE of Ben Wyvis another series of heights passes off, the hollows being occupied by the streams flowing SE to the Cromarty Firth. The principal tops between the Glass which reaches the Firth below Evanton, and the Alness which reaches it below Alness, are Meall Beag (2121 feet) and Meall Mor (2419), Meall an Tuirc (2049), Beinn na Diollaidhe (1851), and Caishlan (1715); between the upper part of the valley of the Alness, called Strath Rusdale, and the upper part of the valley of the Balnagowan Burn, called Strath Rory, are Beinn Tharsuinn (2270) and Doire Leathan (2089). To the N of Strath Rory is Cnoc an t-Sabhail (1116 feet).

Rivers and Lochs.—There are a considerable number of rivers throughout the county, and the small streams are simply innumerable. On the NE the drainage is carried to the Dornoch Firth by the Oykell, of which the principal tributary from the Ross-shire side is the river Einig, and by the river Carron, the head-stream of which is the Abhuinn a Ghlinne Mhoir in Gleann Mor, and the principal tributary the Black Water (NW). Farther down the firth are the Wester Fearn Burn, the Balblair Burn, the Edderton Burn, and the Aldie Water. On the extreme NW is the river Kirkaig, and Enard Bay receives the river Polly and the Abhuinn Owskeich. On the N side of the outer part of Loch Broom is the river Kanaird in the strath of the same name, and in the inner portion the Ullapool from Glen Achallt and the Lael and Broom at the head of the loch, the latter being formed by the junction of the Droma from Dirrie More (SE), and the Cuileig from Gleann Mor* (SW). Little Loch Broom receives the Strathbeg river at the top, and into Gruinard Bay flow the Gruinard river from Strath na Sheallag on the SE, and Little Gruinard river from Fionn Loch in the centre. The surplus water from Loch Maree reaches Loch Ewe by the river Ewe, and Loch Maree itself receives the Fhasaigh from Lochan Fada on the NE side near the head; Kinlochewe river at the head—the principal streams of this being the Bruachaig (E) and the Ghairbhe (SW)—and on the SW side the rivers Grudie and Lungard. The principal stream flowing into Gair Loch is the Kerry, and Upper Loch Torridon receives the river Torridon at the head, and the Balgay from Loch Damh on the N side, while Loch Shieldaig receives the Shieldaig from Glen Shieldaig at the upper end, and the Abhuinn Dubh from Loch Lundie on the SW. In the rest of the Applecross peninsula a number of fair sized streams flow direct to the Inner Sound, the chief being the river Applecross flowing into Applecross Bay, a little to the S of the centre. Loch Kishorn receives the Kishorn, Loch Carron the river Carron, Loch Alsh a fair sized stream from Gleann Udalain, Loch Long the Ling (NE) and the Elchaig (ESE), and Loch Duich at the upper end the Croe (NE) and the Shiel (SE). At the top of Glen Shiel the watershed is crossed, and the Clunie flows eastward to Loch Clunie at the head of Glen Morriston. To the NE of Glen Elchaig are streams flowing to the upper end of Loch Monar, and so away down Strath Farrar, and farther to the NE still is the river Orrin and the small streams flowing to it. To the N of Glen Orrin is Strath Conan, with the river Conan issuing from Loch Luichart, and receiving about 1½ mile from the Loch the Meig (W), which flows through a long narrow winding glen, extending westwards to Moruisg. Flowing into Loch Luichart is the Bran, which issues from Loch a Chroisg and flows down Strath Bran, passing through the lochs of Achanalt and Chuilinn near the lower end, and between the latter loch and Loch Luichart receiving the Fannich from Loch Fannich on the N. To the E of Loch Luichart is Loch Garve, which receives from Strath Garve the Black Water, which is formed by the union of streams from Strath Rannoch (N), Strath Vaich (N), and the Glascarnoch river (NW). Below Loch Garve the stream is still known as the Black Water, and it flows into the Conan 1½ mile below Contin church. The principal streams flowing into the Moray Firth are the Avoch, Rosemarkie, and Ethie Burns; and the Cromarty Firth receives Newhall Burn (S) at Udale Bay, the Conan from Strath Conan and the Peffery from Strathpeffer, both at the upper end; the Skiack and Glass passing to the S and N respectively of Evanton village, both rising on Ben Wyvis, and the latter passing through Loch Glass; the Alness flowing through Alness village; and the Balnagowan Burn flowing into the head of Nigg Bay.

There are about 80 lochs of fair size, and an immense number of smaller lochs and lochans. Of these the principal only can be mentioned here, the figures showing the height of the surface above sea-level. Other information about all the leading ones will be found in separate articles dealing with them. On the Kirkaig are Fionn Loch (357 feet) and Loch Veyatie (366); on the Polly, Loch Skinaskink (243) and Lochan Gainmheich (251), and connected with it farther S is Loch na Doire Seirbhe (222); on the Owskeich are Loch Owskeich (72) and Loch Bad a' Ghaill and Loch Lurgan, both 173; and in Glen Achallt is Loch Achallt (265). At the summit level of the pass of Dirrie More is Loch Droma (about 900 feet); and on the other branch of the Broom river—the Cuileig—is Loch a Bhraoin (813), while to the SE in a corrie of Sgurr Mòr is the lofty Loch a Mhadaidh (1831). In the course of the Gruinard river is Loch na Sheallag (279 feet), and stretching south-eastward from Loch Ewe is the celebrated Loch Maree (32). To the N of Loch Sheallag are Lochan Gaineamhaich, Loch Mor Bad, and Lochan Eich Dhuibh (737 feet); to the E of the centre of Loch Ewe are Loch a Bhaid-luachraich (311) and Loch Fada (498). To the NE of Loch Maree and distant from it 3 miles, across the mountain ridge, are Fionn Loch (559 feet) and Lochan Fada (1000)—the former having a number of smaller lochans connected with it; among the hills between this and Loch Sheallag are Loch Ghiubhsachain, Loch Toll a Mhadaidh, Lochan na Bearta, Lochan Feith, and Fuar Loch Mor; and farther N between Little Gruinard river and Gruinard river is Loch a Mhadaidh Mor. Connected with the river Ewe and the NW end of Loch Maree are Loch Tollie (W, 388 feet) and Loch Kernsary (E); and connected with the upper part of it are Loch Garbhaig (1000) N of Ben Slioch; Loch Clair and Loch Coulin (WNW) on the course of the Ghairbhe and about 280 feet above sea-level; and the small Lochan Coire Mhic Fhearchair at a height of about 1900 feet on Beinn Eighe. On the course of the Kerry are Loch Bad an Sgalaig (353 feet), Dubh Loch close beside it, and at the source Loch na h'Oidhche (1250) between Busbheinn and Beinn an Eoin. On the opposite side of Busbheinn are Loch a Ghobhainn and Loch a Bhealaich (both 1000 feet), the source of the Horrisdale Water, farther down which are Loch Gaineamhaich (900) and Loch Braigh Horrisdale (302); the stream flows N to Gair Loch. To the E of Loch Diabaig, in the SE of outer Loch Torridon, is Loch Mhullaich (443 feet); to the S of Upper Loch Torridon is Loch Damh (129), and farther up the same hollow Loch Coultrie, and on the Amhainn Dubh flowing into Loch Shieldaig is Loch Lundie (753). On the river Carron are Loch Dhughaill (168 feet), and high up near the sources Loch Sgamhain (Seaven, 491); at the source of the northern branch of the river Ling is Loch an Laoigh (877); and on the Elchaig are Loch na Leitrach (281), and at the source Loch Muirichinn (1500); while in Glen Clunie is the upper half of Loch Clunie (606), and on the course of the river Loyne part of Loch Loyne (700). At the top of Glen Cannich—which is mostly in Inverness-shire—is Loch Lungard (761 feet) and about half of Loch Mullardoch (705); at the top of Glen Strath Farrar—also mostly in Inverness-shire—is about ⅔ of Loch Monar (663), and farther W An Gead Loch, Loch an Tachdaidh, and Loch Calavie (1129); near the source of the Orrin are Am Fiar Loch (1000) and Loch na Caoidhe; in Strath Conan are Loch Beannachan

* Not to be confounded with the Gleann Mor of Strath Carron.


ROSS & CROMARTY
SUTHERLAND
INVERNESS
Loch Broom
Loch Greinord
Loch Torridon
Loch Carron
Loch Alsh
Loch Beauly
Loch Ness
Loch Fannich
Loch Glass
Loch Monar
Loch Luichart
Loch Garve
Loch Achanalt
Loch Meyley
Loch Mharie
Loch Beannam
Loch Duich
Loch Lochy
Loch Lynne
Loch Gair
Loch Maree
Loch Clair
Loch Rosque
Loch Kernsary
Loch Ewe
Loch Kanaird
Loch Kinellan
Loch Kinellar
Loch Slapin
Loch Eynort
Loch Bracadale
Loch Harport
Loch Snizort
Loch Portree
Loch Staffin
Loch Leathan
Loch Fleet
Loch Brora
Loch Eriboll
Loch Inchard
Loch Laxford
Loch Assynt
Loch Shin
Loch Naver
Loch Hope
Loch Stack
Loch Eriboll
Summer I.
Priest I.
Horse I.
Isle Maree
Scalpa I.
Longa
Fabba
Cow I.
Crowlin Is.
Raasay
Applecross
Strath Carron
Strath Bran
Strath Oykel
Strath Vaich
Strath Rannoch
Strath Conon
Strath Glass
Strath Farrar
Strath Mulzie
Strath Beauly
Strath Nairn
Glen Affaric
Glen Morrison
Glen Garry
Glen Cannich
Glen Strathfarrar
Glen Orrin
Glen Convinth
Glen Urquhart
Glen Moriston
Glen Shiel
Glen Elchaig
Glen Lichd
Glen Torridon
Glen Carron
Glen Udalain
Glen Grudie
Glen Ulladale
Glen Douglas
Glen Dochart
Glen Beg
Glen Affaric
Glen Garve
Glen Convinth
Glen Farrar
Glen Morrison
Glen Strathfarrar
Glen Cannich

(465), Loch Luichart (280), and Loch Achilty (170); and in Strath Bran Loch a Chuilinn (350), Loch Achanalt (365), Loch a Chroisg (508), and, SW of Auchnasheen, Loch Gown (543); while in the tributary hollow of the river Fannich is Loch Fannich (822). In the valley of the Black Water is Loch Garve (220 feet), with the small Loch na Croic at the lower end; and at the top of Strath Vaich are Loch Toll a' Mhic and Gorm Loch; while near the source of Glascarnoch river is Loch a Gharbh Raoin and Loch Coire Lair. In the lower basin of the Conan is Loch Ussie (419 feet); NE of Ben Wyvis are Loch Glass (715) and Loch Morie (622), the latter sending off a tributary to the Alness; 1 mile N by E of Fearn station is Loch Eye (51); on the upper waters of the Carron (Dornoch Firth) is Loch Crom (1730) between Beinn a' Chaisteil and Beinn Tharsuinn; and in Strath Oykell are the Kyle of Sutherland (tidal) near the mouth and part of Loch Ailsh (498); while on Corriemulzie Burn, a tributary of the Einig, is Loch a Choire Mhoir, and on Abhuinn Poiblidh, a tributary of Rappach Water, the main source of the Einig, is Loch na Daimh (672), and NW from it the small Lochan Eilean and Clar Lochan. The whole of the principal rivers and lakes abound with fish of various kinds, and furnish capital sport, but most of them are preserved, being let with the adjacent shootings.

On the W coast there are a large number of islands, but most of them are of small size. The chief are:—in Enard Bay, Eilean Mor (4 × 2 furl.); in outer Loch Broom, Ristal (8½ × 8 furl.), Tanera More (1⅝ × 1⅜ mile), Tanera Beag (6½ × 4 furl.), and Horse Island (8 × 3 furl.); farther up at Strath Kanaird, Isle Martin (1 × ⅝ mile); in Gruinard Bay, Gruinard Island (10 × 5 furl.); in Loch Ewe, the Isle of Ewe (2 × ⅝ miles); at the mouth of Gair Loch, Longa (1 × ½ mile), and farther in, Eilean Horrisdale (3 × 3 furl.); at the SW point of Applecross, the Crowlins, of which Eilean Mor is 1¼ × ⅝ mile, and Eilean Meadhonach (8 × 2 furl.); at the entrance to Loch Kishorn, Kishorn Island (2 × 1½ furl.); and near the entrance to Loch Alsh, Eilean nan Gillean (2 × 1 furl.). Of these the ones that are or have been inhabited within the last twenty years with their populations in 1871 and 1881 respectively are:—Crowlin (26, 9), Ewe (50, 43), Gillean (10, 6), Gruinard (0, 6), Horrisdale (37, 0), Kishorn (6, 0), Isle Martin (42, 42), Ristal (27, 0), and Tanera (114, 119). The county of Cromarty is scattered all over Ross-shire in twenty different pieces, of which a great many are along the peninsula of Tarbet, to the S of the Dornoch Firth. They cannot all be particularly mentioned here, but the four largest are the portion to the S of the entrance to the Cromarty Firth, extending 12 miles along the shore of the firth, with an average breadth of 3 miles; a portion in Coigach, in the extreme NW, extending 20 miles from Enard Bay to Corriemulzie Burn, and with an average breadth of about 10 miles; a portion extending from the top of Ben Wyvis to Loch Ussie, 8 miles, and with an average breadth of 2½ miles; and a portion N of Loch Fannich, measuring 5 miles from N to S, and 7 from E to W, and including all the high ground round Sgurr Mòr. For a detached portion of the county of Nairn, at the top of the Cromarty Firth, reference may be made to Nairnshire.

As might be expected the scenery of Ross-shire is extremely varied. The western part of the county shows little but a sea of hills with brown undulating expanses of moorland and bare rock, intersected by hollows occupied by streams and lochs, and the whole in most places dull and dismal, except when the heather is in bloom. Many of the hollows, however, contain fertile haughs, though except in Mid and Easter Ross there is but little wood. Natural forests appear to have anciently covered almost the entire county, but they are now represented by straggling copses of oak, birch, and Scotch pine. In the early part of last century Lord Seaforth set the example of extensive planting, and subsequently many of the other proprietors followed suit, and extensive plantations now exist, principally, however, along the shores of the Beauly, Cromarty, and Dornoch Firths, and especially about Brahan, Redcastle, Tulloch, Novar, and Balnagowan. The greater part of the land along the firths is also fertile and highly cultivated.

Geology.—The striking physical features which arrest the attention of the observer in the W part of the county are due to the remarkable geological formations in the NW of Scotland. In this county as well as in Sutherlandshire there is a considerable development of those Archæan rocks which formed the floor of the succeeding Cambrian deposits. They are the oldest rocks of which we have any record in Scotland, and whatever may have been their origin, there can be no doubt that as a whole they are now highly crystalline. Consisting mainly of micaceous and hornblendic gneiss with bands of mica schist and numerous veins of granite and pegmatite, they have generally a persistent strike towards the WNW or NW. Nowhere are the characteristic features of these ancient rocks more strikingly developed than on the shores of Loch Maree, between the mouth of the loch and Letterewe, where they form irregular lumpy hills or bosses, retaining the rounded outline imparted to them by the ice-sheet. An interesting feature connected with the series in that district is the occurrence of a crystalline limestone on the shores of Loch Maree above the house of Letterewe. It has been quarried on both sides of the Fuolish, where it is associated with dark grey gneiss and schist intersected with quartz veins. From the S bank of Loch Maree the Archæan gneiss can be traced SW to Gair Loch, while at Shieldaig on Loch Torridon it reappears from underneath the great pile of Cambrian Sandstones. At these localities it possesses the same NW strike, and presents the same crystalline characters.

To these crystalline rocks succeed a prodigious development of red sandstones, grits, and conglomerates, regarded by Murchison as the equivalents of the Cambrian rocks of Wales. They are grandly developed in the mountains of Applecross, on the colossal heights N of Loch Torridon, and again on the shores of Loch Maree. Owing to the comparatively low angles of inclination of the beds, the successive outcrops form a series of terraces in marked contrast with the Archæan rocks, on which they rest unconformably. The unconformable junction is admirably seen on the shores of Loch Maree, Loch Torridon, and Gair Loch. Where the gneiss passes underneath the overlying grits, it presents a rounded contour analogous to that produced by glacial action: indeed the suggestion has been made by Dr A. Geikie that these rounded outlines may be due to such an agency acting in pre-Cambrian time. At the base there is usually a coarse breccia composed mainly of subangular fragments of the underlying crystalline rocks. Behind the hotel at Gair Loch this basal breccia is admirably exposed, and is remarkably coarse; some of the included blocks of schist measuring 5 feet in length. Indeed, this deposit has been compared to moraine matter on account of the angular earthy character of the material. This breccia is succeeded by alternations of brecciated sandstones, fine conglomerates and grits, eventually graduating upwards into fine grained red sandstones.

The series just described is overlaid unconformably by quartzites, fucoid beds, and limestones, which, from evidence obtained in Sutherlandshire, are regarded as of Lower Silurian age. The various subdivisions of these Silurian rocks as worked out in the recent Geological Survey of Sutherland will be given in the general article on the geology of Scotland. At present it will be sufficient to state that the same zones, varying from the basal quartzites to the lowest subdivision of the limestone, are also to be found in Ross-shire. With the aid of these zones it will be possible to unravel the complicated structure of the ground extending along the line of junction between the Silurian rocks and the eastern schists. One of the most remarkable features in the W of Ross-shire is the striking appearance presented by certain lofty mountains of Cambrian Sandstone, the tops of which are capped with a thin cake of

white quartzite. In some instances, as on Ben Leagach, the basal quartzites have been isolated by denudation, and hence in the far distance they resemble a thin capping of snow on the sombre-tinted sandstones.

In Ross-shire there is the clearest evidence in proof of those great terrestrial displacements which intervened between the Lower Silurian period and the Old Red Sandstone (see general article on Geology of Scotland, vol. iii., *Ord. Gaz.*). Not only do the eastern schists overlie the Silurian rocks, but at certain localities the comparatively unaltered Archæan gneiss is made to rest transgressively on various members of the Silurian series. The latter phenomenon is well seen in Glen Logan, N of Kinlochewe, and on the hill slope on the right bank of the stream. This section is of the highest importance, as showing that the remarkable geological structure which prevails in Eriboll is also to be met with in Ross-shire. To Professor Bonney belongs the credit of having been the first to point out that the coarsely crystalline gneiss in Glen Logan is merely a portion of the Archæan gneiss, which has been brought up by a great fault, and made to overlie the quartzites and limestones. On the right bank of the stream the quartzites, fucoid beds, serpulite grit, and limestone follow each other in regular order, till they are abruptly truncated by a massive crystalline rock resembling the Archæan gneiss, which occurs in the bed of the stream, and can be followed up the hill slope to the W. Though it presents in places a highly crushed appearance, still the NW strike is retained throughout a great part of the mass. Veins of granite, pegmatite, and lenticular bosses of hornblende rock occur in the midst of the gneiss. Indeed, the presence of these veins in the foliated rock has, in a great measure, given rise to the controversy regarding the true nature of this crystalline mass. On the E side of the valley the upper great reversed fault, or thrust plane, is met with, which ushers in the eastern schists. At that locality they consist of fine grey and blue flaggy schists, which at the first blush one would be apt to regard as slightly altered Silurian flagstones; but the microscopic examination plainly shows that the constituents have undergone considerable alteration. These rocks are well developed in Glen Docherty, and they are traceable for a long distance across the county above 'the upper thrust plane.' Inclined at a gentle angle to the SE, they are eventually overlain towards the E by more highly crystalline garnetiferous schists exposed on Ben Fyn. These are followed by flaggy mica schists and gneiss, which are repeated by a series of folds to the E border of the county, where they are covered by the Old Red Sandstone. There is one remarkable zone in the eastern schists deserving of notice, as it possesses peculiar lithological characters. It is admirably seen in Strath Garve near Innisbae, both in the stream section and on the ground by the roadside, where it consists of a coarse porphyritic gneiss, with large crystals of felspar, the long axes of which run parallel with the lines of foliation. The plates of mica envelop the felspar crystals, and the peculiar arrangement of the latter relatively to the other ingredients is identical with that occurring in the *augen* gneiss of German petrographers. Another remarkable band, found between Garve and Dingwall, is the famous garnet rock, which has become celebrated for the size and beauty of the garnets obtained from it. Finally, reference ought to be made to the occurrence of that rare mineral, zoisite, in the neighbourhood of Garve, as recently described by Mr W. Bell.

Along the E border of the county the metamorphic crystalline rocks are covered unconformably by the representatives of the Old Red Sandstone. The boundary between these two formations forms a sinuous line which can be traced from the neighbourhood of Beauly, N by Strathpeffer and the Ault Graat, to Edderton on the Dornoch Firth. At the base of the series there is generally a coarse breccia or conglomerate forming rounded hills; the pebbles being composed of the underlying crystalline rocks. These coarse conglomerates graduate upwards into red or chocolate sandstones

and flags, with grey bituminous flags and shales, which are seen in Strathpeffer, in the Ault Graat, and in the Alness river. On this horizon the Rev. Dr Joass of Golspie obtained a series of ichthyolites from calcareous nodules embedded in red clays closely resembling the well-known fish bed on the S side of the Moray Firth. These ichthyolitic flagstones are overlaid by an upper band of conglomerate of considerable thickness, through which the famous gorge of the Ault Graat has been excavated. To this zone succeeds reddish sandstones and shales which apparently form a great synclinal fold in the basin of the Cromarty Firth, rising with a steep inclination on the E side of the basin. Along the Black-Isle from Munlochy to the Sutors of Cromarty, there is a great anticlinal fold revealing the ancient crystalline rocks, and the conglomerates marking the base of the series. In the calcareous nodules embedded in the clays overlying these conglomerates at Cromarty, Hugh Miller obtained a fine series of fish remains—a locality which has since become famous through his classic descriptions. The same anticlinal fold is traceable in the ridge to the N of the entrance to the Cromarty Firth, where similar basal beds occur. From the investigations of the Rev. Dr Joass, it would appear that fossils are to be met with in the flaggy strata at Geanies. In the cliff at the W boundary of Geanies there are several bands of calcareous shale resting on red sandstones which have a general inclination to the NW. These beds are traceable along the shore as far as the site of the old Mill of Tarrel, where they have yielded an entire specimen of *Coccosteus* and other ichthyolites. It is highly probable, therefore, that this series of calcareous flagstones occupies the same horizon as the flaggy strata on Culloden Moor. Beyond Geanies the strata just described are followed by reddish, grey, and yellow sandstones resembling the Upper Old Red Sandstone on the S side of the Moray Firth, which are specially interesting on account of the curious reptilian tracks found in them.

In connection with the Old Red bituminous flags in Strathpeffer, reference ought to be made to the occurrence of the mineral Albertite in veins up to two inches thick. From the descriptions of these veins recently given by Mr Morrison, Dingwall, it appears that in all cases they are vertical or nearly so, and that they trend E and W, irrespective of the geological formation in which they are found. They occur both in the gneiss at the head of the valley and in the micaceous sandstone farther down the strath. The mineral is found even in the E and W fissures in the Conglomerate overlying these sandstones, but, strange to say, not in the cracks with a different trend.

At the base of the cliff formed by the Palæozoic strata of the Black Isle and the N Sutor, there are certain patches of Oolitic rocks which, notwithstanding their limited development, are of great interest. They occur on the beach beneath high-water mark at Eathie, and again at Port-an-Righ and Cadh-an-Righ near Sandwick. The great fault traversing the great glen is prolonged towards the NE, skirting the base of the Old Red Sandstone cliff of the Black Isle, and by means of this dislocation these patches of Jurassic strata have been brought into conjunction with the Palæozoic rocks. Near the village of Sandwick, the strata are composed of hardened shales with bands of argillaceous limestone which are traversed by numerous transverse faults shifting the outcrops of the beds. From the researches of Professor Judd it appears that the patches at Port-an-Righ and Cadh-an-Righ belong to the Lower and Middle Oolite, while that at Eathie pertains to the Upper Oolite. The section at Cadh-an-Righ shows the following order of succession: next the talus at the base of the cliff covering the position of the fault, there are estuarine sandstones and blue clays followed by sandstones, clays, and limestones, with fresh-water fossils. These are succeeded by shelly bands and clays yielding both fresh-water and marine shells, overlain by a thin coal seam. According to the classification adopted by Professor Judd, these zones represent

the Lower Oolite, the thin coal seam being the equivalent of the Main coal at the top of the Lower Oolites of Sutherland. Here, however, it has thinned away to a few inches, but its position is clearly defined by the 'roof-bed,' consisting of sandy clay merging into hard sandstone, becoming in places calcareous from the abundance of shells. A remarkable feature connected with the 'roof-bed' at this locality is the number and size of the belemnites found in the upper part of the band, but otherwise the fossils agree with those obtained from the same horizon in Sutherland. This zone is followed by sandstone, sandy clays, and dark blue clays, with marine fossils belonging to the Middle Oolite. At Port-an-Righ certain dark blue shales, with bands of sandy argillaceous limestone, are met with, which are regarded by Professor Judd as the equivalents of the Coralline Oolite of England. They have yielded, among other forms, *Belemnites sulcatus, B. abbreviatus, Ammonites vertebralis, A. cordatus, A. excavatus, Gryphæa dilatata, Pecten demissus.* The small patches at Eathie, which have also become widely known through the publications of Hugh Miller, consist of Upper Oolite shales and limestones, which have been thrown into a series of sharp folds, and display a crushed appearance close to the fault. A remarkable feature connected with these patches at Eathie is the occurrence of pseudo-dykes traversing the shales and limestones usually in the direction of the axes of the anticlinal folds. Instead of being composed of igneous materials, these dykes consist of ordinary sediment; indeed, an oolitic shell was found by Hugh Miller in one of the veins. It is evident that the fissures must have been filled from above with the sediment, and that this must have taken place subsequent to the faulting and folding of the strata. They have generally been considered as belonging to the Lias, but on palæontological grounds Professor Judd classifies them with the Upper Oolites of Sutherland. The peculiar species of ammonites and belemnites, the abundance of *Lima concentrica, Ostrea Roemeri,* with the remains of Conifers, Cycads, and Ferns, seem to indicate close affinities with the types of fossils obtained from the Upper Oolites of Sutherland. In the S patch at Eathie Bay the strata exhibit certain lithological differences from their Sutherland equivalents, as they consist of finely laminated shales with bands of limestone; but in the N patch the intercalation of grits and sandstones in the black shales points to physical conditions resembling those which prevailed during part of this period in Sutherland. The presence of thin bands with plant remains led to unsuccessful attempts in search of coal at this locality. The following fossils have been obtained from these beds: *Belemnites spicularis, B. obeliscus, Ammonites mutabilis, A. flexuosus, A. biplex, Lima concentrica, Avicula* sp., *Nucula* sp., *Pecten* sp., etc. In addition to these fossils numerous fish remains have been found, consisting of bones, teeth, scales, etc., and with these are associated the vertebrae of *Ichthyosaurus.* From these references it is apparent that, though the patches of Secondary strata at the base of the Ross-shire cliff are very fragmentary, they are of great interest as affording means of comparison with their representatives in Sutherland.

The glacial phenomena of Ross-shire are in many respects remarkable, though only a brief allusion can here be made to them. On the W seaboard the general trend of the ice-markings is towards the NW or the WNW. On the area occupied by the Archæan gneiss on the shores of Loch Maree the rounded contour indicating intense abrasion by the ice-sheet is everywhere apparent, the prevailing direction of the striæ being parallel with the long axis of the loch. Round Gair Loch and Loch Torridon the trend of the striæ is WNW. Perhaps the most remarkable examples of the effects produced by the ice-sheet in polishing and striating rock surfaces are to be found in the areas occupied by the quartzites. At the head of Little Loch Broom, at Corryhourachan, there is a magnificently glaciated slope of quartzite, where the striæ are as fresh as if the ice had but recently produced them. On the E side of the watershed the general direction of the ice-markings is towards the Moray Firth.

In the lower parts of the valleys bordering the Moray Firth there is a considerable development of boulder clay, and on both sides of the great watershed the moraines belonging to the later glaciation cover extensive areas. Indeed, there is no more striking feature in the glacial phenomena of the W part of Ross-shire than the great extent and size of the moraines. Most of the main valleys and the tributary streams possess great groups of moraines. Further, we find on the shores of the Beauly, Dornoch, and Cromarty Firths a considerable development of gravels which probably belong in part to the 100-feet sea beach. This high-level terrace is very imperfectly preserved compared with the 25-feet beach which forms a belt of flat land round the fiords on the W coast and the firths on the E seaboard.

Soils and Agriculture.—The soil varies very much, the western hill districts having it mostly very poor and bad, while the other parts of the county include some of the best agricultural land in Scotland. All the arable land lies on the E coast or in the glens and haughs of the streams, the rest of the surface being pastoral or under game. In the Black Isle the soil varies considerably, being light and gravelly along the centre of the ridge, while all along the coast it is rich black loam, and good clay with a subsoil of sand, gravel, and clay. Deposits of Moray-coast or pan (see ELGIN-SHIRE) have been mostly broken up and removed. The clay subsoil is in some places on the Cromarty Firth side of great depth. On the SW it is a light but fertile loam. Round Dingwall the soil varies from a good clayey loam, which produces excellent crops of wheat, to light rich friable mould, and through this to mountain clay, sand, and gravel, and poor mossy mould. Along the upper part of the Cromarty Firth, on the N side, the land is, on the low ground, heavy loam overlying clay, and, on the higher ground, a gravelly loam, but farther to the NE it becomes lighter. In the flat between the Cromarty and Dornoch Firths it varies from loam to clay or to sand, but the loam is the prevailing soil, and is in some places very deep, and yields excellent crops. The E coast is much drier than the W coast, the rainfall along the former averaging about 50 inches, and in the E about 24, the difference being accounted for by the prevailing wind, which, being westerly and south-westerly, comes in from the Atlantic laden with vapour. Between Loch Carron and Loch Alsh, where no outlying islands protect the mainland, the rainfall is sometimes excessive, and has been known to exceed 70 inches in a single year. The average mean annual temperature is about 46°, the greater summer heat on the E coast being counterbalanced by the milder winters on the W. Complaints were once common that the seasons were becoming gradually colder and harvests later, but this seems now to have ceased to be the case.

Up till the end of last century farming was in a very backward state, but in 1798 the farm of Meikle Tarrel, in the parish of Tarbat, 'was taken on a nineteen years' lease by a farmer [Mr George Mackenzie] who had studied the most approved mode of agriculture in East Lothian. The farm, which then consisted of about 250 acres of arable land, was occupied by several small tenants, whose lands were in a state of wretchedness, and their house afforded accommodation for neither man nor beast. This farmer brought with him horses and implements of husbandry of the very best description from the south, as also farm servants of his own training. This was the first introduction of modern husbandry into this part of the country, from which the introducer obtained the name of Farmer George. In bringing his system into practice he had at first to contend with many deep-rooted prejudices. Even the proprietor could not then understand how his interests were to be forwarded by encouraging his tenants. In the first place a dwelling-house was to be built, as also a set of suitable offices, houses, and a thrashing-mill and garden, etc., enclosed. All this was done at the farmer's own

expense, without any assistance from the proprietor, and at an outlay of £1500. The soil being good, and the new system bringing it into favourable operation, the farmer soon began to reap the reward of his expense and labours, and in the seventh year after his entry he had the satisfaction of obtaining for his wheat and oats the highest price in Mark Lane—circumstances which dissipated the opposition of prejudice and raised up a spirit of imitation.' He was soon followed by others, and 'during the first fifty years of the present century,' says Mr James Macdonald in his paper 'On the Agriculture of the Counties of Ross and Cromarty,' in the *Transactions of the Highland and Agricultural Society* for 1877, 'it is not too much to say that the agricultural and social customs of Ross and Cromarty were completely revolutionised. Large tracts of land were reclaimed, draining and fencing were executed extensively, new dwelling-houses and farm-steadings were built, roads were made, improved farm implements were introduced, threshing-mills brought into the country, a regular and systematic course of cropping was adopted, artificial manures introduced; the barley, oats, and potatoes of the olden times supplemented by wheat, turnips, and clover; better horses, better cattle, and better sheep were bred; and, in short, almost every trace of the primitive simplicity and rude barbarities of the feudalistic time were abolished for ever.' In the latter part of the century the changes have been equally great, fencing, draining, squaring fields, and reconstruction of buildings having been extensively carried on; the introduction of artificial manures and further improvements on the system of cropping have made great changes for the better; and the communication established by the construction of the Highland railway has given a great impetus to the breeding and rearing of stock for the market. Since 1850 over 51,000 acres of land have been reclaimed, and the rental in some districts has increased over 100 per cent., and on an average probably over 40 per cent. everywhere. The principal reclamations have been carried on by Mr Fletcher of Rosehaugh, the Hon. H. J. Baillie of Redcastle, Mr Mackenzie of Ord, Mr Davidson of Tulloch, Sir Alexander Matheson of Ardross, and the late Mr Kenneth Murray of Geanies, and Mr John Fowler of Braemore. In 1854 the whole area under crop of all kinds, including hay, grass, and permanent pasture, was about 87,919 acres, and in 1876 this had risen to 124,826 acres; while in 1884 it was 134,187 acres, a percentage of arable land to whole area of only 6·7, that for all Scotland being 24·2, and for Fife 74·8. The areas under the various crops at different dates are given in the following tables:—

Grain Crops.—Acres.

Year.	Wheat.	Barley or Bere.	Oats.	Total of All Grains.
1854	7527	7,551	16,645	32,717
1869	7356	9,370	28,806	46,746
1876	6019	10,461	29,509	47,413
1884	2182	12,729	31,701	46,612

Grass, Root Crops, etc.—Acres.

Year.	Hay, Grass, and Permanent Pasture.	Turnips.	Potatoes.
1854	19,641	10,467	5394
1869	28,547	16,735	9524
1876	29,987	17,126	9256
1884	59,850	16,155	9335

while there are about 1500 acres annually under other root crops or lying fallow. Harvest in Easter Ross begins usually about the second or third week of August. The farms are worked mostly on the five-shift rotation, but for some of the lighter lands the six-shift is adopted, and on a few of the very rich soils the four-shift. The average yield of wheat is from 28 to 36 bushels, but on some of the richer soils from 40 to 56 bushels are produced; barley, 32 to 48 bushels; oats, 32 to 48 bushels; turnips, 20 to 35 tons; and potatoes, from 4 to 8 tons. The last are very variable, and the figures given are too high for the product of the poorer class of crofts. The great decrease of the area under wheat within the last 10 years is as well marked here as elsewhere, and is the more noteworthy as Ross was formerly the fifth wheat county in Scotland, and in point of quality and amount produced per acre ranks even higher. It is to be accounted for partly by the effect of recent wet seasons on the rich land on which it is grown, but still more by the great decline in the price of wheat.

The agricultural live-stock in the county at different dates is shown in the following table:—

Year.	Cattle.	Horses.	Sheep.	Pigs.	Total.
1854	15,850	3975	251,619	4583	276,027
1869	36,671	6681	390,788	4664	438,804
1876	41,609	7079	362,980	6535	418,203
1884	42,028	7208	309,388	6876	366,000

The number of cattle bred is small, but the number fed is very large. The animals are mostly Highland or crosses, and at Udale is a herd of shorthorns. From the table it is seen that in 30 years the number of cattle has been trebled, but the figures by no means represent the actual number of cattle fed in the county, as cattle bought in autumn are fattened during the winter and sold off in spring before the Board of Trade returns have been collected. The farm horses were formerly broad low-set 'garrons,' and though now greatly improved by the introduction of good Clydesdale stallions, they still want bone and substance, and among the smaller farmers and crofters ponies are common. The area in Wester Ross under sheep is enormous, and, indeed, Wester Ross is almost as celebrated for its sheep farms as Easter Ross for its arable land. Systematic sheep-farming was introduced into the county about 1764 by Sir J. L. Ross of Balnagowan, who, taking one of the sheep farms on his estate into his own hands, replaced the native small-growing Kerry breed of sheep with black-faces, and for 7 years—the only sheep farmer north of Aberdeenshire—he, in spite of all opposition, stubbornly stuck to his purpose of introducing a better breed of sheep. By and by, however, others joined him, and the beginning of the present century saw sheep-farming firmly established in Ross-shire. In the first 10 years of the present century Leicester tups were introduced, and about 1815, Cheviots. Half-bred sheep from Leicester tups and Cheviot ewes are now common, as well as grey-faces bred from Leicester tups and black-faced ewes. Sheep-farming reached its point of greatest prosperity about 1860-70, but since then it has begun to decline, owing partly to the low price of wool brought about by the large quantities now imported from abroad, and also to many of the grazings having, under sheep entirely, deteriorated, so that they will no longer carry the same number of animals. The total decrease since 1869 has been about 11 per cent. Ewe lambs and ewes are sold at Inverness Wool Fair, or in autumn at Muir of Ord, while wethers are generally sold at the Wool Fair. The young sheep are generally sent to winter in the lowlands, as far sometimes as Aberdeenshire, but from the higher and bleaker districts both young and old sheep have alike to be removed during the winter months. The best land rents at 40s. an acre, the medium at about 22s., and the poor at 10s.; and the rents of sheep farms are on an average about 4s. per head. Almost 93 per cent. of the holdings are under 50 acres, 87 per cent. under 20 acres, and 69 per cent. under 5 acres, and of the remainder two-thirds are over 100 acres. The county has double the number of holdings of under 5 acres of any other county in Scotland, and the only county that exceeds it in the total number of holdings is Aberdeenshire. In 1876 there were 4510

holdings of under 5 acres, 1189 between 5 and 20 acres, 355 between 20 and 50 acres, 175 between 50 and 100 acres, and 286 above 100 acres, some of the latter being, of course, enormously large sheep farms.

The area of the county may be estimated as follows :—Arable land under crops and permanent pasture, 134,298 acres ; under deer, 719,305 ; under wood, 43,201 ; lakes, rivers, and foreshore, 93,012 ; under sheep alone, about 500,000 ; and waste heath and grouse moor, about 600,000. The whole district under heath amounts probably to about 1,000,000 acres, but over a large part of the county this is mixed with fine pasture. The deer forests given up to deer alone number 39, and some of them are very extensive. Their area is 719,305 acres, and the rental £45,628, while in addition there are forests where sheep and deer graze together. There are also a number of excellent grouse moors and all the usual high and low country game. The largest proprietors are the Duchess of Sutherland, Lord Middleton, Sir Kenneth Mackenzie, Sir Alexander Matheson, Sir A. G. R. Mackenzie, Sir C. W. A. Ross, Mr R. C. M. Fergusson, Mr Bankes, Mr D. H. C. R. Davidson, Mr A. J. Balfour, Mr John Fowler, and Mr H. Mackenzie. According to the *Miscellaneous Statistics of the United Kingdom* (1879), 1,971,682 acres, with a total gross estimated rental of £269,342, were divided among 2044 landowners, five together holding 1,051,507 acres, (rental £70,210), four 268,913 (£11,088), twelve 366,063 (£37,738), twelve 154,704 (£34,145), seven 47,163 (£27,410), fifteen 47,733 (£19,081), etc. ; and of these 2044 landed proprietors about 85 per cent. hold less than one acre. The principal mansions, etc., most of which are separately noticed, are Allangrange House, Amat Lodge, Applecross House, Ardross Castle, Ardullie House, Avoch House, Balconie House, Balnagowan House, Bayfield House, Belmaduthy House, Birchfield House, Brahan Castle, Calrossie House, Castle Leod, Conan House, Corriemoillie Lodge, Coul House, Cromarty House, Dalbreac Lodge, Duncraig House, Dundonnell House, Flowerdale House, Foulis Castle, Geanies House, Highfield House, Inverbroom Lodge, Invergordon Lodge, Inverlael Lodge, Kerrisdale House, Kildary House, Kinbeachie House, Kindeace House, Leckmelm House, Ledgown Lodge, Letterewe, Loch Luichart Lodge, Loch Rosque Lodge, Morangie, Mountgerald, Newhall House, Newmore House, Novar House, Ord House, Pitcalnie, Poyntzfield House, Raddery House, Redcastle, Rockfield House, Rosehall House, Rosehaugh House, Shandwick House, Stornoway Castle, Strathmore Lodge, Teaninich House, Tarbat House, Tarlogie Lodge, Tarradale House, Tulloch Castle, and Westfield House.

Industries and Communications.—Except the distillation of whisky at Dalmore, Teaninich, Ord, Dingwall, Glenmorangie, and Balblair distilleries, there are no manufactures. The salmon fisheries, however, in the rivers and estuaries are extensive and valuable, and there are also large sea-fisheries. Of the 26 fishery districts into which Scotland is divided, Ross-shire contains Cromarty on the E coast, and on the W coast Stornoway, and Loch Broom and part of Loch Carron. In 1883 there were employed in these districts (taking half Loch Carron as belonging to Ross-shire), 415 first-class, 700 second-class, and 1332 third-class boats, or 8·1, 15·8, and 24·4 per cent. of the boats in their respective classes in the whole of Scotland. In the same year these gave employment to 8970 fisher men and boys, 107 fish curers, 116 coopers, and 8162 other persons ; the value of the boats employed—a large proportion of which do not, however, belong to the county—was £43,719 ; of nets, £67,274 ; and of lines, £14,272. The number of barrels of herring cured was 74,249, and the number of cod, ling, or hake taken was 445,253. Commerce enjoys considerable physical advantages from the many bays and inlets, and with many of those on the W coast communication is regularly maintained by lines of steamers from the Clyde. The principal articles of export are cattle, sheep, wool, grain, and fish. The fairs, markets, and trysts for cattle and sheep, some established by act of parliament, others by custom, are numerous, and are held at convenient places. Regular communication was established with the S in 1839, when the steamer *Duke of Sutherland* began to trade between Leith, Inverness, and Invergordon, and subsequently two steamers were put on the passage. These were, however, superseded by the Highland railway ; which was opened in 1862 as far as Dingwall, in 1863 to Invergordon, and in 1866 to Tain and Bonar-Bridge, and the line from Dingwall to Strome Ferry in 1865-68. The portion of the system within Ross-shire enters the county on the SE at Muir of Ord station, passes N by the valley of the lower Conan to Dingwall, and from that skirts the N shore of the Cromarty Firth as far as Logie-Easter. There it sweeps inland by Fearn, and reaching the Dornoch Firth near Tain skirts its southern shore all the way to Invershin at the upper end of the Kyle of Sutherland, where it passes into Sutherlandshire. The Dingwall and Skye section strikes westward by the valley of Strathpeffer and the valley of the Black Water to the mouth of Strath Garve, and to Loch Luichart ; thence up Strath Bran, and then south-westward across the watershed, down Glen Carron, and along the SE side of the loch to the terminus at the narrows at Strome. The whole railway system follows the line of the old main roads, and, besides these, district roads run up almost all the glens that have been mentioned, and provide the necessary communication for the different parts of the low country, or between one part and another. The opening of the railway system has been of the utmost advantage to the county, both from the opening up of trade, and from the great influx of summer tourist traffic brought about by its means.

The royal burghs are Dingwall (the county town), Tain, and Fortrose including Rosemarkie ; the only parliamentary burgh is Cromarty ; the only town of over 2000 inhabitants is Stornoway—which is a police burgh ; and smaller towns and villages are Alness, Avoch, Back, Ballallan, Ballintore, Barvas, Lower Bayble, Upper Bayble, Bragar, Breascleat, Carloway, Coll, Conan Bridge, Evanton, Twelvepenny Borve, Garrabost, Gruver, Hilton of Cadboll, Inver, Invergordon—which is a police burgh—Jeantown, Knockard, Laxdale, Leurbost, Maryburgh, Mellonchares, Plockton, Portmahomack, Rarnish, Saltburn, Shandwick, Shawbost, Swainbost, Swordle, Tolsta, Tong, Ullapool, Valtos, and Vatskeir.

The civil county contains the thirty-one entire *quoad civilia* parishes of Alness, Applecross, Avoch, Barvas, Contin, Cromarty, Dingwall, Edderton, Fearn, Fodderty, Gairloch, Glenshiel, Killearnan, Kilmuir-Easter, Kiltearn, Kincardine, Kintail, Knockbain, Lochalsh, Lochbroom, Lochcarron, Lochs, Logie-Easter, Nigg, Resolis, Rosemarkie, Rosskeen, Stornoway, Tain, Tarbat, and Uig, two parts of parishes, viz., Urquhart and Urray ; and includes also the *quoad sacra* parishes of Carnoch (Contin, Fodderty, and Urray), Croick (Kincardine), Cross (Barvas), Fortrose (Rosemarkie), Kinlochluichart (Contin, Fodderty, and Urray), Knock (Stornoway), Poolewe (Gairloch), Shieldaig (Applecross and Lochcarron), and Ullapool (Lochbroom). These are included ecclesiastically in the presbyteries of Chanonry, Dingwall, and Tain in the synod of Ross, and the presbyteries of Lochcarron and Lewis in the synod of Glenelg. Except in Avoch, Cromarty (which has a Gaelic chapel), Fortrose, Rosemarkie, and Alness, the services are conducted in Gaelic. There are also 43 places of worship connected with the Free Church, 3 in connection with the United Presbyterian Church, 1 in connection with the Congregational Church, 5 in connection with the Episcopal Church, 2 in connection with the Roman Catholic Church. In the year ending September 1883 there were in the county 126 schools, of which 121 were public, with accommodation for 16,137 children, 11,828 on the rolls, and an average attendance of 8495. The staff consisted of 151 certificated, 9 assistant, and 74 pupil teachers. Ross-shire, with (1884-85) a consti-

tuency of 1746, returns one member to parliament; while Fortrose, Cromarty, Dingwall, and Tain have shares in other two. Ross and Cromarty are each governed by a lord-lieutenant and a vice-lieutenant, and the former has 56 deputy-lieutenants and about 230 justices of the peace. The sheriffdom is Ross, Cromarty, and Sutherland, with resident sheriff-substitutes for Ross and Cromarty at Dingwall and Stornoway. Ordinary and small debt courts are held at Dingwall every Friday during session for the parishes of Alness, Applecross, Avoch, Contin, Dingwall, Fodderty, Gairloch, Glenshiel, Killearnan, Kiltearn, Kintail, Knockbain, Lochalsh, Lochbroom, Lochcarron, Resolis (partly in Ross, the rest being in Cromarty), Rosemarkie, Urquhart, and Urray; at Stornoway every Tuesday during session for the parishes of Barvas, Lochs, Stornoway, and Uig; and at Tain every Tuesday during session for the parishes of Edderton, Fearn, Kilmuir-Easter, Kincardine, Logie-Easter, Nigg, Rosskeen, Tain, and Tarbat. Small debt courts are also held quarterly at Invergordon and Fortrose in January, April, July, and October; at Ullapool and Jeantown half-yearly in April and October; and at Cromarty as required. The police force consists of 40 men (1 to each 2120 of the population), under a chief constable, with a salary of £310 a year. In 1883 the police dealt with 391 cases, in 273 of which convictions were secured, in 61 proceedings were subsequently dropped, and 3 were disposed of otherwise than at the police court. Of the whole cases 230 were in Wester Ross and 93 in Easter Ross. In the former division, with a population of 34,830, there are 89 licensed houses; and in the latter, with a population of 16,027, 48 licensed houses. The number of registered poor in 1882 was 2819; of dependants on these, 1068; of casual poor, 69; of dependants on these, 62. The expenditure for poor law purposes was £34,328. All the parishes are assessed, and seven of them form the Black Isle Poor Law Combination, with a poorhouse near Rosemarkie; while ten form the Easter Ross combination, with a poorhouse near Tain. The proportion of illegitimate births averages about 4·6 per cent., and the average death-rate about 16 per 1000. Connected with the county are the 3d (militia) battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's), with their headquarters at Dingwall; Ross-shire Artillery Volunteers, with companies at Stornoway and Lochcarron; and Ross-shire Rifle Volunteers, with companies at Tain, Dingwall, Fortrose, Munlochy, Ullapool, Invergordon, Evanton, Brahan, and Gairloch. Valuation (1674) £7683, (1815) £121,557, (1850) £160,565, (1866) £210,991, (1876) £262,817, (1885) £266,601, *plus* £28,623 for railways. Pop. of registration county, which takes in part of Urray parish from Inverness-shire and of Urquhart and Logie-Wester parish from Nairnshire, (1871) 82,093, (1881) 79,467; civil county (1801) 56,318, (1811) 60,853, (1821) 68,762, (1831) 74,820, (1841) 78,685, (1851) 82,707, (1861) 81,406, (1871) 80,955, (1881) 78,547, of whom 37,027 were males and 41,520 females. In 1881 the number of families was 17,524, of houses 15,665, and of rooms 51,475. Of the total population 1431 males and 629 females were connected with the civil or military services or with professions, 441 men and 2938 women were domestic servants, 1090 men and 13 women were connected with commerce, 14,600 men and 4882 women were connected with agriculture and fishing, and 5741 men and 1048 women were engaged in industrial handicrafts or were dealers in manufactured substances; while there were 13,200 boys and 12,576 girls of school age. Of those connected with farming and fishing 9445 men and 4436 women were concerned in farming alone, and 5219 farmers employed 1706 men, 325 boys, 621 women, and 448 girls.

The Synod of Ross, which meets at Dingwall on the third Tuesday of April, contains the presbyteries of Chanonry, Dingwall, and Tain, all of which are separately noticed. There is also a Free Church synod of Ross, containing three presbyteries, with the same names as those of the Established Church. The Episcopal Church bishopric of Moray, Ross, and Caithness is noticed under Moray.

The territory now forming the mainland districts of the combined counties belonged to the ancient Caledonii or Dicaledonæ, and afterwards to the same tribes under the name of the Northern Picts. The eastern territory formed one of the mortuaths (see Moray), but of its mormaers there is no account, though Macbeth, mormaer of Moray, seems to have held sway in Ross as well. The eastern portion between the watershed and the Beauly, Moray, and Dornoch Firths was the Ross proper of this early period, while the portion W of the watershed was included in the province of Aregaithel or Ergadia. The history of the island division is traced under Hebrides. After the middle of the 12th century the district seems to have been annexed to the Crown, for Malcolm IV. granted it to that Malcolm Macheth whose career is noticed in the article Moray, and who held it till 1179, when, after his rebellion, he was driven out by William the Lyon, who, in order to secure his authority, erected forts at Dunscaith, to the N of the entrance to the Cromarty Firth; and at the site of the modern Redcastle. William had hardly quitted the district when a fresh insurrection broke out in favour of Donald Ban MacWilliam, who was defeated in 1187, and the province along with Moray again annexed to the Crown. Nominally the earldom had been granted to the Count of Holland, but we find him complaining that he had been deprived of all real power though he had not been forfeited, and in reality, probably the whole district remained in a very turbulent state. Alexander II. granted the earldom to Ferchard Macintaggart, the heir of a line of lay abbots of Applecross, and thus the eastern and western portions of Ross were united, and the foundation of the present county formed. Subsequently an heiress carried the earldom to Walter de Lesly, and afterwards to Alexander Stewart, Earl of Buchan (see Harlaw), but it reverted thereafter by another heiress to the Celtic Lords of the Isles, by whom, in the person of John of Isla, it was in 1476 resigned to the Crown. Both before and after this the shire was constantly disturbed by the turbulence of the Lords of the Isles and the clans who inhabited it. Notices of some of the conflicts and disturbances will be found under Inverness and the various parishes. The present county was constituted in 1661. The bishopric was founded prior to 1128, as a charter granted by King David in or about that year is witnessed by, among others, Makbeth, bishop of Rosemarkie. The defeat of the Marquis of Montrose in more recent times is noticed under Kincardine. For the Celtic and Scandinavian remains, reference may be made to the articles on the various parishes.

During the clan period the greater part of the county was in the possession of the powerful sept of the Mackenzies; the Munroes occupied a district round Fowlis Castle and Alness, measuring about 8 miles square; the Rosses or Clan Ghillanders, possibly representing one of the older tribes, held the district between the lower parts of the Cromarty and Dornoch Firths, and extending north-westward as far as the Einig; a branch of the Macleods of Lewis held the territory bounded NE by the line of Loch Ewe and Loch Maree, and on the S by a curved line, extending from the southern end of Loch Maree to Loch Diabaig on outer Loch Torridon; and the Glengarry Macdonalds held two small patches —one all round Little Loch Broom, and bounded eastward by Loch Broom and Abhuinn Cuileig, and westward by the line of Strath na Sheallag and the Gruinard river; and the other, in the point between Loch Kishorn and Upper Loch Carron, and along all the SW side of the latter loch. The common language in Wester Ross is still Gaelic, and many of the inhabitants speak no English, but the number of these is rapidly diminishing. In Easter Ross, Gaelic is confined to the labouring classes. As has been already noticed, the county contains a large number of small holdings, and these are scattered everywhere, occupying the poorer soils in the eastern division, the ridge of the Black Isle,

and most of the seaward glens and straths in the W. The crofters on the E coast are fairly well off, but on the W coast the poverty is extreme,* the holdings being too small to maintain a large family, and the system of cultivation miserable—indeed the cultivation is mostly marked by an absence of system, grain-crop following grain-crop, or potatoes, potatoes, without any break or rest. In such a poor life superstitious beliefs and observances still linger, and witch-doctors are by no means rare, though outsiders can find them out with difficulty, as they generally keep out of the way of those who are thought to come to scoff. Illicit distillation seems also to be still extensively carried on in the more inaccessible regions all along the western seaboard, and within the last three years (1881-84) a number of the 'sma' stills' have been found and destroyed by the inland revenue officers.

Ross, The. See Ross, Lanarkshire.

Rosyth Castle, a ruin on the coast of Inverkeithing parish, Fife, 1⅜ mile NW of North Queensferry. It stands on a small sea-rock, connected by a causeway with the mainland, but surrounded at high water by the tide; and is a square, thick-walled tower of considerable height, somewhat resembling a Norman keep. Over its main entrance on the N side is the date 1561, with the initials M. R. (Maria Regina). A large mullioned window on the E side is dated 1655, when the damage was repaired of Cromwell's men four years before. And on the S side is this quaint inscription:—

'In dev tym dra yis cord ye bel to clink
Qvais mery voce warnis to mete and drink.'

Rosyth Castle is said to have been the birthplace of Oliver Cromwell's mother, a tradition noticed by the Queen under date 6 Sept. 1842; and it figures in Scott's novel of *The Abbot*. The barony of Rosyth was purchased by Sir David Stewart about 1435, and remained with his descendants till about the beginning of last century. It was then sold to the Earl of Rosebery, but belongs now to the Earl of Hopetoun.—*Ord. Sur.*, sh. 32, 1857. See vol. ii. of Grose's *Antiquities of Scotland* (1791).

Rothes. See Markinch.

Rothes, a parish containing a small police burgh of the same name, near the centre of the SE boundary of the county of Elgin, in which the greater portion of it lies, while a part is also across the Spey on the Banffshire side. It is bounded N by the parishes of St Andrews-Lhanbryd and Speymouth, for ½ mile at the NE corner by Bellie, E and SE by Boharm parish and Banffshire, SSW by Knockando, for ⅝ mile at the W corner by Dallas, and NW by the parishes of Birnie and Elgin. The greater part of the eastern and south-eastern boundaries are natural, lying along the river Spey, except near the centre, where from Sheriffhaugh about 1 mile above Boat of Bridge upwards to the bend immediately to the E of the village of Rothes, the parish occupies both the Elginshire and Banffshire sides of the river for a distance of about 2¾ miles; and for a small portion where, at Haughs of Arndilly to the S of the burgh of Rothes, both parish and county boundaries take to the W side of the Spey for about ¾ mile, following, however, apparently an old course of the river. Along the other sides the boundary is artificial. The greatest length of the parish, from where Speymouth, Bellie, and Rothes parishes meet on the NE south-westward to the boundary with Knockando parish, is 9 miles; the greatest width, along the south-western border, from Craigellachie Bridge on the E west-north-westward to the point where the parishes of Knockando, Dallas, and Rothes meet, is 6¾ miles; and the total area is 20,133·785 acres, of which 317·784 acres are water, while 899·332 acres, including 48·008 of water, are in Banffshire. The surface is irregular, but slopes gradually from E to W. The whole of the ground on the E along the Spey is low and level, particularly at the fertile haughs of Orton, Dundurcas, Rothes, and Dandaleith, two of which figure in the old rhyme which declares that

'Dipple, Dundurcas, Dandaleith, and Dalvey
Are the four bonniest haughs on the banks of the Spey.'

The haughs are separated from one another by hill spurs, which run westward into rounded eminences which skirt the low land and pass into wild uplands along the western border, reaching a height of 639 feet near Whiteriggs (NE), 925 above Netherglen (N), 887 above Pitcraigie (centre), 1065 at Brylach (NW), 1165 at Brauch Hill (W), 1104 W of The Kettles, and 1114 E of The Kettles (SW). The surface declined to less than 160 feet above sea-level in the NE corner of the parish, and the height of the road at the S end of the burgh of Rothes is 228 feet. The low ground is highly cultivated, and as the encircling heights are covered with thriving woods, the scenery is at many points very pretty. The drainage in the NE is carried off by the Inchberry and Sourden Burns, in the centre by the Auchinroath and Back Burns, and in the S and SW by the Burn of Rothes, the last three all uniting to the NE of the burgh of Rothes before they flow into the Spey. None of the streams are of any great size, but in the great flood of 1829, all of them, as well as the Spey, did a great amount of mischief. At the flat at Dandaleith 26 acres of excellent land were carried away, and 50 more covered with sand and gravel to a depth of 3 feet, and the stacks of corn in the farmyard were swept away. The Burn of Rothes and the Back Burn rose very high and overflowed the whole of the centre and the north-eastern end of the burgh of Rothes. Those of the inhabitants 'who were themselves in safety flew to succour their friends and neighbours who were in peril. Then were the stout and active of both sexes seen wading in at the risk of being carried away by the stream, and dragging the young, the aged, and the infirm, some of whom had not for years been from under a roof, out of their windows or doors as they best could, and carrying them, some on their backs, some in their arms, through the deep and powerful currents. Peats in black masses, firewood, poultry, and pigs were seen tumbling along; and every now and then the young fellows were dashing in and hauling out huge hogs by the hind legs, or plunging to the middle after some other live or dead object. Fortunate it was that all this confusion occurred during the light of day, and that the whole of the people were placed in safety before nightfall; but, as the burn increased and the bridge in the centre of the village gave way, darkness brought with it a night of dreadful suspense. There was a partial subsidence here as elsewhere; but after 12 o'clock next day, the flood again rose and to a still greater height, and either totally demolished or partially destroyed 15 dwelling houses of as good and substantial masonry as could possibly be built.' Many of the houses were filled with gravel and mud to a depth of 5 feet; from 70 to 80 acres of haugh land were carried away; and in the whole parish there were 107 families rendered destitute. At the rock of Sourden the Spey was 20 feet 10 inches above its ordinary level. There is excellent salmon and trout fishing in the Spey, and the larger burns contain trout. The soil of the low flat grounds is mostly a very fertile alluvium with patches of clay, sand, and gravel; that along the skirts of the hills is a sharp gravelly mould; and that on the higher arable grounds is principally a mossy earth with patches of clay. Fully one-third of the total area is pastoral or waste; about 1000 acres are under wood; and the rest is under cultivation. The underlying rocks are Silurian schists, granite, and quartzite; one mass of the last at Conerock to the S of the burgh of Rothes being particularly noteworthy for its finely-veined structure. In the course of the Sourden Burn there is a vein of heavy spar. Many large erratic blocks are to be found on the uplands, and a bed of finely laminated clay in the course of the Back Burn is worthy of notice. The haugh of Rothes seems to have been formed in a large lake by the dammed back waters of the Spey, ere the rocky barrier at Sourden was cut down to its present level. The parish is

* In the period of distress, in the beginning of 1883, the proportion of paupers to population in eight of the western parishes was 1 in 17, and in Lochbroom parish it was as high as 1 in 13.

traversed from end to end along the eastern border by the great line of road following the left bank of the Spey, and at the burgh of Rothes another main line of road branches off to the NW and passes by the great hollow, known as the Glen of Rothes, to Elgin. Following the same course as this line of road is the Morayshire section of the Great North of Scotland railway system, which has a course of 7 miles in the parish from the point where it enters on the NW near Netherglen, till it quits it on the SE at Craigellachie viaduct. A branch line passing from Rothes station down the valley of the Spey to Orton station on the Highland railway system has not been worked since 1866. Auchinroath (J. C. Robertson, Esq.) is a plain two-story house, 1½ mile NNW of Rothes station. Glen Rothes (Dunbar of SEA PARK), 3 miles NNW of Rothes, is a plain summer residence, built in 1871. ORTON HOUSE is separately noticed. The chief antiquities are the remains of Rothes Castle, and the ruins of Dundurcas church. The Castle of Rothes stands on a steep rounded hillock to the SW of the burgh, and only a very small fragment of it now remains, though it appears to have been a place of considerable size and strength. It seems to occupy the same site as, but to be of later date than, the castle or manor-house of Rothes, where Edward I. stayed on 29 and 30 July 1296, when he was on his way back from his first visit to the N of Scotland. The barony of Rothes belonged, in the 12th century, to a family called Pollock, and by the marriage of the heiress Muriel de Pollock, passed to the family of Murthac, and again by subsequent heiresses, first to Watsons and then to the Leslies, who in 1457 became Earls of Rothes. They sold their estates in this quarter about 1700 to Grant of Elchies, from whom Rothes was, in 1708, acquired by the Earl of Findlater, and along with his estates passed to the family of Grant of Grant, Earl of Seafield, in whose possession the property still remains. Rothes gives title to the Leslie family, but their seat is now Leslie House, in Fife. Dundurcas is separately noticed, as is also the hamlet of Inchberry in the NE of the parish. The parish of Rothes, which was enlarged in 1782 by the addition of part of the suppressed parish of Dundurcas (the rest being given to Boharm), is in the presbytery of Aberlour and synod of Moray, and the living is worth £216 a year. The church is noticed below. Under the school board the Rothes and Inchberry schools, with accommodation for 350 and 79 pupils respectively, had, in 1883, attendances of 194 and 52, and grants of £194, 18s. 5d. and £43, 15s. Valuation (1884-85) £13,322, 9s., of which £12,949, 10s. was in Elginshire and £372, 10s. in Banffshire, while £2813 was for the railway. The principal landowner is the Dowager Countess of Seafield, who holds 10,758 acres, valued at £4370 per annum ; 10 other proprietors hold each an annual value of £500 or upwards, 3 hold each between £500 and £100, 5 hold between £100 and £50, and there are a number of others of smaller amount. Pop. (1801) 1521, (1831) 1709, (1861) 2407, (1871) 2148, (1881) 2201, of whom 1063 were males and 1138 females, while 19 were in Banffshire. Houses, 476 inhabited, 30 uninhabited, and 2 being built.

The TOWN of ROTHES was constituted a police burgh in 1884. It stands in the SE of the parish just described, and has a station on the Morayshire section of the Great North of Scotland railway system. It is by rail 3 miles N of Craigellachie, 7 NNW of Dufftown, and 11 SSE of Elgin. Founded in 1766, it was long a mere township of crofters ; but has now come to be the centre of some local trade. The original feus were given off along the road which runs from N to S, the portion to the S being now known as Old Street, which is continued to the N as New Street. Intersecting the line of these at an acute angle are Green Street and Burnside Street, and Breich Street and Land Street run parallel respectively to New Street and Green Street. The original houses, which were merely one-story thatched tenements, have now to a large extent been replaced by more pretentious structures. The Established church, near the centre of the town, is a plain building with 800 sittings. It was repaired in 1868, and a clock tower added by public subscription in 1870. A Free Church congregation was formed at the Disruption, but the church was not built till 1858. The Free Church school adjoining is now disused, and has been sold. The public school, on the E side of the town, is a handsome building, erected in 1875-76 at a cost of £2500. To the W of the town are the Glen Grant, Glen Rothes, and Glen Spey distilleries, the first erected in 1840 and since greatly enlarged, the second erected in 1878, and the last in 1883-84. The Glen Grant distillery can produce about 4000 gallons of whisky per week, and the others about 3000 gallons each. On the Burn of Rothes there is also a meal mill. A system of drainage is to be introduced, half of the expense being borne by the superior. Gas was introduced in 1850, and water in 1870, the supply being taken from a spring below the farmhouse of Blackhall. An additional supply is shortly to be introduced, but the source is not yet settled. Municipal matters are, under the Lindsay Act, managed by a senior magistrate, 2 junior magistrates, and 6 commissioners. Municipal constituency (1884) 456. There is a post office, with money order, savings' bank, and telegraph departments, under Elgin, branch offices of the Caledonian and North of Scotland banks, a National Security Savings' Bank, agencies of 15 insurance companies, a police station, a masonic lodge (St John's, No. 193). There are fairs on the Thursday before the third Fridays of March and April, the Monday before the first Tuesday of June, the Monday before the third Tuesdays of July and October, and the Tuesday before the third Wednesday of December ; but, except that in July, which is a large harvest feeing market, they are practically extinct. Sheriff small debt courts are held four times a year for the parishes of Rothes and Knockando, and police courts as required. Pop. of the village (1861) 1465, (1871) 1319, (1881) 1382, of whom 666 were males and 716 females. Houses (1881) 327 inhabited, 24 uninhabited, and 2 being built.—*Ord. Sur.*, sh. 85, 1876.

Rothesay (perhaps from Gaelic *Reogh-siudh*, 'King's seat'), a post and market town, sea-port, and royal burgh, is the chief town of Buteshire, and stands at the head of Rothesay Bay, on the E side of the island of Bute, 9 miles WNW of Largs, 11 NW of Millport, 22 NNE of Brodick, 19 SSW of Greenock, and 40 W by N of Glasgow. The situation of the town is both beautiful and sheltered. The bay enters between Ardbeg Point on the W and Bogany Point on the E, which lie 1⅝ mile apart ; and from the middle of a straight line joining these two points, it stretches inland for about a mile. Its shape resembles what mathematicians call a semi-ellipsoid. All round it is screened by a gentle and varying slope, rising in the E to Ardencraig (433 feet) and in the SW to Barone Hill (530) ; while from the town and harbour there stretches on either side, round the entire circuit of the bay, a curving line of elegant villas, picturesquely set with their gardens and shrubberies against a background of trees or sloping-ground, and only interrupted on the W side of the bay, where Skeoch Wood borders the road for some distance. At some parts, though beyond Rothesay proper, this line of houses is doubled ; and within the limits of the burgh the steep slope in the SE of the town is occupied by houses that rise above each other in terraces. As the old song has it—

> 'The great black hills, like sleepin' kings,
> Sit grand roun' Rothesay Bay ;'

and the views commanded from points upon its shores are singularly fine. The stretch of water outward from the bay has been described by 'Delta' as 'fairer than that of which Naples makes her boast.' The coast of Cowal, immediately opposite, is adorned with the mansion and pleasure-grounds of Castle-Toward, and is overhung in the distance by lofty mountain masses, stretching away to the rugged peaks of the Duke of Argyll's Bowling-Green ; to the NE are seen the pleasant hills of Renfrewshire ; and northward one looks into the stern Highland recess of Loch Striven. 'Sweet Rothesay Bay'

itself is beautiful. In any weather and under any circumstances it would attract the eye, but it looks its best under a bright summer sun, with its blue waters dotted with skiffs and white-sailed yachts, and ploughed by the keels of gaily-crowded steamers.

The town, as seen from the bay, is picturesque, the villas especially adding to the ornamental appearance. The commercial and business parts of the burgh are chiefly congregated at the head of the bay, immediately behind the harbour and quay, or along the line of the High Street, which, contrary to the usual precedent, does not extend along the shore, but directly inland. An open space between the inner harbour and the coast end of High Street is known as Guildford Square. Thence towards the W bay runs Victoria Street, and to the E bay Albert Place and East Princes Street; while the bulk of the best of the town lies to the W of High Street and S of Victoria Street. The buildings in Guildford Square and in the principal streets are fairly handsome; but the less important streets are remarkable neither for fine building nor for breadth of roadway. The cleanliness of the streets is, however, commendable; and considerable improvements have lately been effected in relieving the more closely built parts of the town. About £30,000 has been spent within about 40 years in these improvements; and Russell Street, formerly the Old Vennel, bears the name of one of the most active promoters of the scheme, Mr Thomas Russell of Ascog. The outskirts are open and cheerful; and the villas and houses there are both neat and comfortable. The houses are built for the most part of greenstone, which lacks the lightness and polish of sandstone; but their regularity and tidiness compensate this failing. To the N of the harbour a space of rough foreshore of about 4 acres was, in 1869-70, at a cost of £5000, converted into a broad esplanade, laid out with ornamental gardens and gravel walks of from 50 to 15 feet in breadth. An octagonal band-stand in the centre, with iron columns and a dome, measures 18 feet in diameter, and 30 high; and was presented to the town in 1873 by Mr Russell of Ascog. Esplanades have also been constructed along the shore on both sides of the bay. There is a public park in High Street, leased from the Marquess of Bute. It makes no attempt to be ornamental. Athletic sports are annually held in it; and the Highland Games Committee have erected a grand stand at a cost of £300. From Guildford Square to Kamesburgh or Port Bannatyne, 2½ miles to the NNW, a tramway line, with frequent cars, was opened in 1882.

The chief modern public edifice is the County Buildings, occupying a conspicuous site with its chief front to Castle Street. This ornamental erection is in the castellated style, and contains accommodation for the town and county officials, a court-room, and a prison—the last, however, closed in 1883. The court-room contains a fine portrait of the late Marquess of Bute, painted by Graham Gilbert, and presented by public subscription to the corporation. The edifice was originally built in 1832 at a cost of £4000; was enlarged in 1865-67; and now represents a total cost of about £12,000. The new Public Halls form a handsome pile fronting Princes Pier, and were built in 1879 by ex-Provost C. Duncan at a cost of £20,000. The largest hall can seat 1350 persons, and there are various small chambers and committee-rooms. Other halls in the town are the Victoria Hall in Store Lane, with accommodation for 500; the Music Hall in Watergate Street, which can hold 400; the West End Hall in Bridge Street, and the Good Templars' Hall in Bridgend Street, each capable of containing 300. On the summit of Chapelhill—so called from its having been the site of a chapel of St Bride, the last remains of which fell in 1860—is a castellated building containing the museum of the Archæological and Physical Society, opened in 1873. The building was erected by the corporation originally as refreshment rooms. The Royal Aquarium, erected in 1875-76 on the site of the former battery at the E end of the town, is the property of a joint-stock company, and cost £15,000, the site being presented by the Marquess of Bute. Designed by Mr J. R. Thomson of Rothesay, the building consists of two one-story wings, stretching from a low dome-covered tower, the whole having a 'rustic' base, and the entrance being by a broad flight of steps. The frontage is 102 feet, and the height 22 feet. It contains a promenade hall measuring 45 by 48 feet, a main corridor 90 by 15 feet, various side rooms, a camera obscura, and a seal-house. The tanks are chiefly in the corridor; and the rock-work about them is supposed to represent the geology of Bute. Half a mile S of the town is the Robertson Stewart college hospital, built in 1873 for £1500 by Mr R. Stewart, a native of Bute, and merchant in Glasgow, and enlarged subsequently by his sons. Other public buildings are the churches and schools noted below. Rothesay has several fountains, viz., the Albert Memorial erected by public subscription in East Princes Street in 1863; the Ballard Fountain on the Esplanade, presented by Mr Ballard of Brighton; the Ewing Fountain in Guildford Square, erected by bequest of Mrs Catherine Ewing in 1862; and the Thomson Memorial (1867), at the junction of Ardbeg Road and Marine Place. In July 1884 a statue was unveiled on the Esplanade to the late Mr A. B. Stewart, convener of the county, and merchant in Glasgow, who has conferred many benefits on the neighbourhood.

The old parish church, in High Street, is a plain building erected in 1796, and contains 955 sittings. New Rothesay church, at the W side of the bay, was originally erected in 1800 as a chapel of ease at a cost of £1300, and contains 830 sittings. It now is a handsome Gothic edifice, with a fine spire. The Established Gaelic church is a chapel of ease, erected for about £600. The Free parish or East Free church and the West Free church are both elegant buildings with conspicuous spires. The Free Gaelic church is on Chapelhill. The U.P. church, at Bridgend, was built about 1840, and contains 647 sittings. A new iron church for the Craigmore U.P. congregation was erected in Crichton Road in 1884. St Paul's Episcopal church, in Victoria Street, has 434 sittings, the Baptist chapel (1855) in Ardbeg Road 400, and St Andrew's Roman Catholic church (1866) in Columshill Street 200. The burgh is well provided with schools. The Rothesay Academy and Thomson Institute occupies a fine Gothic pile with an ornamental tower, designed by Mr J. R. Thomson. It was erected in 1869, and partly endowed by the trustees of the late Mr Duncan Thomson, as a first-class secondary school. Originally the property of the East and West Free churches, it was handed over in 1873 to the burgh school board. It is conducted by a head classical master, and has an English and a mathematical master, besides assistants. The public, former parochial, school in High Street is a handsome building erected by the school board, and having accommodation for 769 boys and girls. Bute Industrial school gives elementary education and industrial training to 120 boys and girls from all parts of Bute; it is managed by a committee of ladies and gentlemen. Bellevue, in Barone Road, in 1882 was converted by Lady Bute into a Roman Catholic orphanage for 16 girls, under the charge of the Sisters, 'Servants of the Sacred Heart.' There are also private adventure schools.

Rothesay has a head post office with the usual departments, offices of the Clydesdale Bank, Royal Bank, Bank of Scotland, and National Security Savings' Bank, and offices or agencies of 28 insurance companies. The chief hotels are the Bute Arms, Victoria, Queen's, Lorne, Eagle, and Argyle Arms, besides 7 temperance houses. Glenburn Hydropathic Establishment, occupying a lofty site on the E side of the bay, was the first institution of the kind in Scotland, having been opened in 1843 by the late W. Paterson, Esq., M.D., who had studied the water-treatment at Gräfenberg in Silesia, under Priessnitz, the father of hydropathy. It contains provision for the accommodation and amusement of 130 persons, together with a very complete system of baths. The salt-water Swimming Baths, built in 1882 at a cost of £1500, and presented to the town by Mr A. B. Stewart,

are situated on the shore, immediately opposite the aquarium. On the opposite side of the bay, in front of Skeoch Wood, are the ladies' and gentlemen's bathing places erected by the burgh. They have dressing-rooms, with attendants, and are screened from view by stone walls. Among the miscellaneous institutions of Rothesay are the horticultural, farmers', and archæological societies, and the Working Men's Club. The Royal Northern Yacht Club has its club-house at Rothesay, built in 1877 adjacent to the Queen's Hotel; and the Royal Rothesay Aquatic Club has its club-house at Skeoch Wood. Both clubs hold annual regattas. There are also bowling-greens in the burgh, and tennis courts at Craigmore. Rothesay has three weekly newspapers—the Liberal *Buteman* (1854) and the Independent *Rothesay Chronicle* (1863) and *Rothesay Express* (1877), the first two published on Saturday, the last on Wednesday; and *The Visitors' List* is published every Friday during the four summer months.

Rothesay is by no means an industrial town. The manufacture of linen was introduced into it about 1750, but it did not flourish. A cotton factory—claimed to be the first in Scotland—was started here in 1779 by an English company; passed later into the possession of the celebrated David Dale; and at one time employed 800 hands. For three-quarters of a century the industry flourished, and it came to employ 4 mills, with 1000 looms and 50,000 spindles; but gradually it began to decline, and at present only one mill is working, the only other existing having stopped in 1880 or 1881. Tanning similarly has lost its importance in the burgh, only one tannery existing where formerly there were three. Boatbuilding, once carried on in two yards, is now extinct, though for 30 years the industry was maintained in a yard with a patent slip belonging to the burgh. Its trade and commerce is equally insignificant. In early times it enjoyed a considerable shipping trade, but about 1700 it was superseded by the growth of Campbeltown. About 1765, when act of parliament made it compulsory that all colonial produce intended for Ireland should first be landed in Great Britain, Rothesay was made a custom-house station for the purposes of the Irish colonial trade. But the first thing to bring prosperity to the burgh was the development of the herring fishery, encouraged by a Government bounty which had for its real object the obtaining of naval reserve recruits. Rothesay became a centre of the west coast herring fishery and of the curing industry, and quite a brisk trade sprang up, employing vessels of considerable size. In 1855 the fishery in the district employed 557 boats of an aggregate tonnage of 2590, 1654 fisher men and boys, and 1102 other persons indirectly; produced 5074 barrels of cured herrings, besides those sold uncured; and the value of the boats, nets, and lines employed was £18,842. But as it began to be more profitable to have the larger curing stations nearer the great fishing centres, the industry began to decline in Bute, and now has quite left Rothesay.

In 1822 an excellent harbour was made at a cost of £600; in 1840 a slip and building dock were added; and in 1863 a large extension of the harbour was made at a cost of £3800. It now consists of two basins—an outer and an inner—with substantially built walls, and protected on the seaward side by a commodious quay, 650 feet long by 80 broad. The quay and harbour walls together cost £25,000. In July 1884 a very handsome suite of waiting-rooms and offices, surrounded with a verandah, was opened at a total cost of nearly £2000. But about £200 is received in the shape of rent annually. The quay is one of the busiest on the Clyde. Nineteen separate passenger steamers touch at Rothesay daily during summer, some of them several times a day; and on the arrival of the large tourist steamers the quay presents a very gay and bustling appearance during 'the season.' Only some ten small vessels of from 36 tons downwards belong to the port; these, with others registered elsewhere, are engaged mainly in importing coals, slates, and building materials, and in exporting turnips, potatoes, and farm produce. The steamers perform most of the other carrying trade connected with the place. For the year ending in September 1883 the harbour revenue was £2397, of which £1994 were paid as dues by the steamboats alone. The expenditure was £1530. The harbour trust is vested in the magistrates and town council and 4 representatives of the shipowners.

Rothesay depends for its prosperity almost entirely upon its character as a watering place and as a centre for visiting the places of interest on the Clyde. The neighbouring seaside resorts of Craigmore, Port-Bannatyne, etc., attract many hundreds of summer visitors, and these draw most of their supplies from Rothesay. The climate of the burgh is eminently suited to the delicate, and has earned for Bute the title of the Madeira of Scotland. The temperature in winter is 13 degrees above the average of Scotland, and in summer 5 degrees cooler; and several eminent physicians have recommended Rothesay as an abode for those suffering from pulmonary complaints. The bathing facilities have already been noted. Boating is safe and convenient, and the letting of small boats is quite an important industry. Yachts find good anchorage in the bay; while those who desire to visit the various places of interest on the Clyde by steamer will find Rothesay the most convenient centre on the firth.

Rothesay was a burgh of barony from an early period, and became a royal burgh in 1400 by charter from Robert III., who also conferred grants of landed property and various privileges. In 1584, a charter of confirmation and novodamus was given by James VI. The ancestors of the Marquess of Bute used frequently to hold the office of provost; and from 1788 till 1839, the office was held exclusively by members of that family. The burgh is governed by a provost, 3 bailies, and 12 councillors. The magistrates and council are also police commissioners, and form, with 4 shipowners, the harbour trust. Prior to 1820, they claimed the right to exercise maritime jurisdiction over all the coasts of Buteshire and the adjacent arms of the Clyde, but since a decision in the court of session at that date, have given up the claim. The burgh revenue in 1883-84, including harbour, gas, water, etc., was £17,651. The municipal constituency numbered 1711 in 1885. In 1884 the police force consisted of 7 men, and a superintendent, with a salary of £120. Sheriff courts are held every Tuesday and Friday in session; and justice of peace courts on the first Monday of every month. Gas works were erected in 1840, and are the property of the corporation. The water supply for the houses on the lower levels is obtained from Loch Ascog, for those on the terraces from Dhu Loch—the two schemes together costing the burgh £36,000. The drainage of the town is carried by means of a brick conduit into deep water in front of the quay. From the union until 1832, Rothesay had a representative in parliament, but since the Reform Bill, it has been included in Buteshire. Annual valuation of burgh (1875) £37,251, (1885) £55,266. Pop. (1821) 4107, (1841) 5789, (1861), 7122, (1871) 7800, (1881) 8329, of whom 4741 were females, and 618 Gaelic-speaking. Houses (1881) 1968 inhabited, 363 vacant, 6 building.

Seal of Rothesay.

The chief antiquity of Rothesay and its most interesting object is its ruined castle, standing near the middle of the S part of the town. The original portion,

believed to have been built by Magnus Barefoot about 1098, consists of a circular building, 138 feet in diameter, with walls 9 feet thick and 26 high, and flanked by 4 round towers, 3 of which were 28 feet in diameter, while the fourth and only remaining one is 33. Within the court are seen the walls of the ancient chapel of St Michael, 45 feet long by 23 broad, built in the Decorated style, and traces of the foundations of other buildings, supposed to have been the residence of the townspeople during sieges. The older part seems to have been built of pink stone from Ascog; the newer part is different in material and style, and is built on to the entrance-front of the original hold. It is believed to have been erected by Robert III., and is called 'the Palace.' The entrance to the castle faces the N, and is surmounted by a shield, bearing a much defaced royal coat of arms. Since 1874, this gateway has been made once more the entrance, access to which is obtained by a drawbridge across a moat, which occupies the basin of the original moat. The restoration of the gateway, drawbridge, and moat, and the removal of contiguous tenements from the castle, were carried through by the Marquis of Bute, hereditary keeper of Rothesay Castle, at a cost of £8000. Among the apartments within the castle are a vaulted hall (43 × 11 feet), a dungeon below the floor, and a grand hall above, to which there is access by a staircase. Still higher, there were sleeping apartments, now disappeared, among which was the small chamber in which Robert III. died in 1406. The walls of the castle are in many places overshadowed by trees, which have taken root in the crevices, and they are picturesquely covered with ivy; while the grounds surrounding it—about 2 acres—have been prettily laid out with shrubberies and flowers.

Rothesay Castle, though not unknown in history as a fort and as a royal residence, presents neither a beautiful nor a highly interesting appearance. As a fortification it was even on the ancient principles very deficient; 'even the gate is neither flanked nor machicolated, and it might have been mined or assaulted at almost any point.' As a royal palace, also, it seems to have lacked even an average amount of comfort and commodiousness. Built, as we have said, about 1098, it is said to have belonged, before the time of Alexander III., to a family of the name of MacRoderick. It underwent extension and improvement at various periods to serve as a fortified palace for the Lord High Stewards of Scotland, and for their successors the Royal Stewarts. It first comes into historical notice in 1228, when it was attacked by Olave, King of Man, and Husbac, King of the Southern Hebrides, with 80 ships, and after a siege was carried by assault with a loss of 390 men. In 1263 it was captured by Haco of Norway, and after the battle of Largs was retaken by the Scots. Under John Baliol it was occupied by the English, but in 1311 it submitted to Robert Bruce. In 1334 it was again seized and fortified in the English interest, but was once more recaptured. Robert II. visited the castle in 1376 and 1381; and Robert III. died broken-hearted within its walls April 13, 1406. Oliver Cromwell's troops destroyed part of its walls in 1650; and in 1685 the brother of the Earl of Argyll burned it and reduced it to utter ruin, either in revenge for a raid into his country, or for some action on the part of the burghers. For long years the castle was left to decay and destruction; it became overgrown with weeds and trees, and environed and hidden by more modern tenements. About 1815, however, the hereditary keeper instituted clearances and restitution, which revealed the terraces, towers, and chapel, with various apartments. Renewed and more extensive clearances and renovations in 1871-77 have brought it to its present well-kept condition. Another interesting antiquity is the ruined choir of the abbey church of St Mary, in the present cemetery, lying rather more than ½ mile from the town. It contains a recumbent figure of Stuart of Bute who fell at Falkirk. The tomb of the family of Bute is a plain Gothic building, painted white, in the old part of the churchyard. Among the old tombstones, that of the Wallaces of Bush, reputed descendants of the great Wallace, is one of the most interesting. There is also a fragment of the monument to the Jamiesons of Kilmorie, hereditary coroners of Bute, which was brought hence from Kilmorie castle, when the family property was transferred to the present Bute family.

The town of Rothesay was originally a village in connection with the castle, and its earlier history is directly associated with the story of that fortress, already narrated. Its later history is merely the account of the rise, progress, and decline of its commerce, and its arrival at its present position as a favourite watering-place and tourist-centre. The Queen and Prince Albert spent the night of August 17, 1847, in Rothesay Bay; and Rothesay she describes in her Journal as 'a pretty little town, built round a fine bay, with hills in the distance, and a fine harbour. The people cheered the "Duke of Rothesay" very much, and also called for a cheer for the "Princess of Great Britain." When we went on deck after dinner, we found the whole town brilliantly illuminated, with every window lit up, which had a very pretty effect.' In 1874 the Princess Louise and the Marquess of Lorne, and in 1876 Prince Leopold, visited the ruins of the castle.

The castle of Rothesay gave title to the first dukedom which existed in the Scottish peerage, and continues the title to the British sovereign's eldest son as a collateral for Scotland to that of Prince of Wales for England. The dukedom of Rothesay was created in a solemn council held at Scone in 1398, and conferred on David, Earl of Carrick, Prince and Steward of Scotland, and eldest son of Robert III.; and when David, in 1402, fell a victim to the ambition of his uncle, the Duke of Albany, it was transferred to his brother James, afterwards James I. of Scotland. An Act of Parliament, passed in 1409, declared 'that the lordship of Bute with the castle of Rothesay, the lordship of Cowal with the castle of Dunoon, the earldom of Carrick, the lands of Dundonald with the castle of the same, the barony of Renfrew with the lands and tenandries of the same, the lordship of Stewarton, the lordship of Kilmarnock with the castle of the same, the lordship of Dalry, the lands of Nodisdale, Kilbryde, Narristoun, and Cairtoun, also the lands of Frarynzan, Drumcall, Trebrauch with the fortalice of the same, "principibus primogenitis Regum Scotiæ successorum nostrorum, perpetuis futuris temporibus, uniantur, incorporentur, et annexantur."' Since that period, the dukedom of Rothesay, in common with the principality and stewartry of Scotland, the earldom of Carrick, the lordship of the Isles, and the barony of Renfrew, has been vested in the eldest son and heir-apparent of the sovereign. In the event of the first-born dying without an heir, the right passes to the sovereign's eldest surviving son; and when the sovereign has no son or heir-apparent, it reverts to the sovereign in person as the representative of an expected prince.

The parish of Rothesay, which included till 1846 the parish of North Bute, now occupies the centre of the island, between the parishes of North Bute and Kingarth, and extends in a narrow strip right across Bute from Rothesay to St Ninian's Bay. Its greatest length, from NE to SW, is 6 miles; its greatest breadth is 2½ miles; and its total area is 6083 acres. It includes the royal burgh of Rothesay. The natural features have been already described in our article on Bute. The chief proprietor is the Marquess of Bute. The parish is in the presbytery of Dunoon and the synod of Argyll; the living is worth £440. Landward valuation (1885) £2414. Total pop. (1861) 7438, (1871) 8027, (1881) 8538, of whom 636 were Gaelic-speaking, whilst ecclesiastically 5626 were in Rothesay and 2912 in New Rothesay parish.—*Ord. Sur.*, sh. 29, 1873. See J. Wilson's *Account of Rothesay and the Island of Bute* (Roth. 1848); J. Roger's *Notices of Ancient Monuments in the Church of St Mary, Rothesay* (1848); J. Thoms' *Rothesay Castle* (Roth. 1870); and the '*Buteman*' *Guide to Rothesay* (Roth. 1881).

Rothie or **Rothie-Norman.** See FYVIE.

Rothiemay, a village and a parish of E Banffshire. The village of Rothiemay or Milltown stands, 290 feet above sea-level, on the left bank of the river Deveron, 2¼ miles NNE of Rothiemay station in Cairnie parish on the Great North of Scotland railway, this being 3½ miles SSE of Grange Junction, 45¼ NW of Aberdeen, and 5 N of Huntly, under which there is a post and railway telegraph office of Rothiemay. Towards the close of 1880 the sewage works of the village were extended and greatly improved, and its water supply was taken from a new source, all at the expense of the Earl of Fife. Fairs are held here on the third Tuesday of May *o. s.* and the Friday after the first Thursday of October *o. s.*

The parish is bounded NE by Marnoch, SE by Inverkeithny and by Forgue in Aberdeenshire, S and SW by Huntly and Cairnie in Aberdeenshire, and NW by Grange. Its utmost length, from E to W, is 6¼ miles; its utmost breadth, from N to S, is 5⅝ miles; and its area is 9368⅝ acres, of which 103½ are water. Shiel Burn runs 4⅛ miles south-westward along all the Grange boundary to the Isla; the ISLA flows 3¼ miles south-eastward along all the Cairnie boundary to the Deveron; and the DEVERON winds 8⅝ miles east-north-eastward—for 1⅝ and for 1¼ mile across the southern and the south-eastern interior, elsewhere along the Huntly, Forgue, and Marnoch boundaries. In the extreme E the surface declines along the Deveron to 195 feet above sea-level; and thence it rises to 871 feet at the Cairns of Geith, 500 at Mossiehead, and 767 at Meikle Brown Hill on the north-eastern border. The northern district, a tolerably level plateau, includes an extensive moss, affording supplies of peat fuel to a wide extent of country, and is elsewhere disposed variously in arable and pasture ground and fine plantations. The southern district is partly a gentle declivity of more than 1 mile in breadth to the Isla and the Deveron, and partly a luxuriant valley, highly embellished with culture and wood. Much land that was formerly in a waste condition has been brought under the plough; and a very extensive aggregate area is under plantations. Granite is the predominant rock; and the soil of the arable lands is mostly rich and fertile. An ancient Caledonian stone circle stands a little way N of the village; and an ancient road, supposed to be a Roman *iter*, traverses the western district. The self-taught astronomer, James Ferguson, F.R.S. (1710-76), was born at the Core of Mayen, in a cottage whose ruins were removed about 1848. Rothiemay House, to the E of the village, is a building of some antiquity, traditionally said to have given a night's lodging to Queen Mary in 1562. Another mansion, MAYEN HOUSE, is noticed separately; and the property is divided between the Earl of Fife and Mr Hay-Gordon. Rothiemay is in the presbytery of Strathbogie and the synod of Moray; the living is worth £285. Places of worship are the parish church (1807; 500 sittings) and a Free church; and three public schools—Mannoch Hill, Rothiemay, and Ternemny—with respective accommodation for 78, 200, and 128 children, had (1884) an average attendance of 64, 70, and 85, and grants of £56, £59, 12s. 6d., and £74, 7s. 6d. Valuation (1860) £4240, (1885) £5060. Pop. (1801) 1061, (1831) 1228, (1861) 1414, (1871) 1370, (1881) 1363.—*Ord. Sur.*, sh. 86, 1876.

Rothiemurchus. See DUTHIL.

Rothie-Norman or **Rothie.** See FYVIE.

Rothmaise Hill. See RAYNE.

Rothney, a village in Premnay parish, Aberdeenshire, close to Insch station.

Rottearns House, a mansion in Ardoch parish, Perthshire, 1¼ mile E of Greenloaning station.

Rotten Calder. See CALDER, ROTTEN.

Roucan, a village in Tortherwald parish, Dumfriesshire, 3½ miles ENE of Dumfries.

Roughrigg, a village near the eastern border of New Monkland parish, Lanarkshire, 2½ miles SW of Slamannan. Pop., with Westfield and Peesweep Row, (1871) 365, (1881) 689.

Rousay, an island of Orkney, 7 furlongs N by E of the nearest point of Evie parish in Pomona, 4¼ miles SSW of Westray, and 11 N by W of Kirkwall, under which it has a post office, with money order and savings' bank departments. Its utmost length, from E to W, is 5¼ miles; its utmost breadth, from N to S, is 4½ miles; and, but for Saviskaill Bay (2½ miles × 1 mile) on the N side, its outline would be nearly circular. The north-western coast is rocky and precipitous, rising rapidly to a height of 399 feet above sea-level; but elsewhere the shore is lower and more sloping, with several safe though small harbours. Of six fresh-water lakes much the largest is the Muckle Water (1½ × ¼ mile; 322 feet), which sends off Suso Burn east-north-eastward to Rousay Sound; but Loch Saviskaill or Wasbister yields far better trout-fishing. On every side the surface rises in hilly acclivity, and forms an upland mass in the general shape of a flattened cone, which, measuring several miles around the shoulder, presents an imposing aspect. The ascent for the most part is steep, and is marked at intervals with abrupt ridges and terraces, apparently former sea-margins. A strip of fertile arable land fringes much of the seaboard, between the beach and the base of the uplands. The latter are suitable for black-faced sheep, for Highland cattle, and for game, Rousay being the best grouse island in Orkney. The rocks belong to the Old Red Sandstone formation. A group of five sepulchral mounds, known as Manzie's or Magnus', on Corquoy farm, were carefully trenched in 1880, and yielded a curious oval urn, of a somewhat metallic appearance. Trumland House, near the southern shore, was erected in 1872 from designs by the late David Bryce, R.S.A., and is the seat of Lieut.-Gen. Frederick William Traill-Burroughs, C.B. (b. 1831), who holds 6693 acres in Orkney, valued at £2116 per annum. The parish of Rousay and Eagleshay comprises also the inhabited islands of EAGLESHAY or Egilshay and WEIR or Viera, both of which are noticed separately; and has a land area of 13,754 acres. It is in the presbytery of North Isles and the synod of Orkney; the living is worth £207. Rousay and Eagleshay have each an Established church, and there are also Free and U.P. churches of Rousay; whilst an Episcopalian cemetery, near Rousay parish church, was consecrated in 1881. Five public schools—Eagleshay, Frotoft, Sourin, Viera, and Wasbister—with respective accommodation for 50, 60, 90, 25, and 65 children, had (1884) an average attendance of 18, 30, 41, 17, and 38, and grants of £29, 8s., £45, 13s., £35, 10s. 6d., £18, 14s. 4d., and £47, 2s. Valuation of parish (1884) £3879, 9s. 4d. Pop. of Rousay island (1811) 795, (1831) 921, (1851) 937, (1871) 860, (1881) 873; of parish (1801) 1061, (1841) 1294, (1871) 1101, (1881) 1118.

Routenburn House, a mansion in Largs parish, Ayrshire, near the shore of the Firth of Clyde, 2 miles N by W of Largs town.

Routing-Bridge. See KIRKPATRICK-IRONGRAY.

Row (Gael. *rudha*, 'a promontory'), a village and a parish in the W of Dumbartonshire. The village lies on the E side of the Gare Loch, immediately SE of the small, low, triangular promontory that gives the parish name, and 2 miles NW of Helensburgh, under which it has a post office, with money order, savings' bank, and telegraph departments. Charmingly situated on a small bight nearly opposite Roseneath village, it has delightful environs of slopes and braes, profusely sprinkled with elegant villas, and richly embellished with gardens, shrubberies, and groves. It is not a seat of any trade, and presents a rural retired appearance, yet serves as a point of thoroughfare for very many neighbouring residents, and for crowds of summer tourists; enjoys frequent daily communication by steamers with Garelochhead, Helensburgh, and Greenock; and has a good small steamboat quay. Pop. (1871) 242, (1881) 527, *plus* 401 on board the Cumberland training-ship.

The parish, containing also the town of HELENSBURGH and most of the village of GARELOCHHEAD, was formed out of Roseneath and Cardross in 1643-48. It is bounded NE and E by Luss, SE by Cardross, SW by

the Gare Loch and Rosneath, and NW by Loch Long. Its utmost length, from NNW to SSE, is 9½ miles; its breadth varies between 2 and 4¾ miles or 6⅛ along Loch Long; and its area is 32 square miles or 20,530⅛ acres, of which 358⅛ are foreshore and 46 water. The road from Helensburgh to Garelochhead and Arrochar runs 7½ miles north-north-eastward along the E shore of the Gare Loch, 2½ miles northward across the neck of the Rosneath peninsula, and then 3¾ miles north-north-eastward along the E shore of Loch Long, till it leaves Row parish near Gorten. Fruin Water, rising at an altitude of 1500 feet above sea-level, winds 8⅝ miles south-south-eastward—for the last 1½ mile along the Luss boundary—till it passes off into Luss parish on its way to Loch Lomond. The surface is everywhere hilly or mountainous, chief elevations from N to S being Creagan Hill (928 feet), Tom Buidhe (936), *Ben Mhanarch (2328), Maol an Fheidh (1934), *Ben Chaorach (2338), *Ben Tharsuinn (2149), the Strone (1683), Auchinvennal Hill (1680), *Balcnock (2092), *Craperoch (1500), and Tom na h-Airidhe (1185), where asterisks mark those summits that culminate on the Luss boundary. Row, on the side of Glenfruin, is naked and heathy; but on the Gare Loch side it has in great part been worked by art into a state of productiveness or of high embellishment. At its SE end, for 1¼ mile inward from the boundary with Cardross, it declines into very gentle upland, and is nearly all under cultivation. The skirts and lower declivities of it, from its eastern extremity to the head of the Gare Loch, are thickly studded with mansions, villas, and *cottages ornées*, embosomed among gardens and woods, and presenting a lovely series of close landscapes; while nearly all of it, from the beach to the summit, commands magnificent views of the Gare Loch and the Clyde, the Cowal mountains, the peninsula of Rosneath, and the hills of Renfrewshire. The rocks are variously metamorphic, Silurian, and Devonian; transition limestone and clay-slate have been worked, but are both of inferior quality; and some useless searches have been made for coal. The soil of the arable grounds is, for the most part, light and fertile. In the immediate neighbourhood of the village of Row, a large trade in illicit distillation of whisky was carried on about fifty years ago. Most of the stills were in Aldownick Glen, a deep ravine ¼ mile from the church. In the *Heart of Midlothian*, Sir Walter Scott alludes to the smugglers here, and to this gorge under the name of the Whistlers Glen, so called probably from the fact that those on the outlook gave warning of the approach of a stranger by imitating the whistle of the curlew. When George IV. visited Scotland, he expressed a desire to taste real smuggled whisky; and the Duke of Argyll procured a barrel from a still at the mouth of this glen for his consumption; though the bargain was a difficult one to make, the Duke having to meet the smugglers personally at the end of Row Point. The conflict of Glenfruin is described under Fruin Water. Ardincaple Castle, the principal mansion, is noticed separately, as also is the Shandon Hydropathic. Sir James Colquhoun of Luss, Bart., is sole proprietor. The present Duke of Argyll was born at Ardincaple Castle, 30 April 1823. Including all the *quoad sacra* parish of Helensburgh and most of that of Garelochhead, Row itself is a parish in the presbytery of Dumbarton and the synod of Glasgow and Ayr; the living is worth £350. The parish church, on the shore of the Gare Loch at the village of Row, was built in 1850, and is a commodious Gothic edifice. An organ was placed in it in 1880, and a clock and chimes in 1881. Its tower, 110 feet high, was partially destroyed by the storm of Dec. 1883, but has been since restored. John M'Leod Campbell, D.D. (1800-71), was minister from 1825 till his deposition for heresy in 1831. A monument in memory of Henry Bell was erected in front of the parish church by Robert Napier, Esq. of West Shandon. (See Helensburgh.) Besides four schools noticed under Helensburgh, the three public schools of Garelochhead, Glenfruin, and Row, with respective accommodation for 137, 75, and 200 children, had (1884) an average attendance of 60, 13, and 117, and grants of £57, 10s., £28, 12s. 6d., and £104, 13s. 6d. Valuation (1860) £32,701, (1885) £79,460, 10s. 8d. Pop. (1801) 970, (1831) 1759, (1861) 6334, (1871) 8439, (1881) 10,097, of whom 1736 were in Row ecclesiastical parish.—*Ord. Sur.*, shs. 30, 38, 37, 1866-76.

Rowadill. See Harris.

Rowallan Castle. See Kilmarnock.

Rowanburn, a village in Canonbie parish, SE Dumfriesshire, near the right bank of Liddel Water, 1⅜ mile ESE of Canonbie village. Pop. (1871) 434, (1881) 407.

Rowardennan, an hotel in Buchanan parish, Stirlingshire, on the E shore of Loch Lomond, opposite Inveruglas ferry, 4 miles S of the summit of Ben Lomond, and 9½ N of Balloch. It adjoins a steamboat pier; is the best starting-place for the ascent of Ben Lomond; and furnishes guides and well-trained ponies for parties making the ascent.—*Ord. Sur.*, sh. 38, 1871.

Rowcan. See Roucan.

Rowchester, an estate, with a fine modern mansion, in Greenlaw parish, Berwickshire, 3 miles SE of the town. It was purchased in 1858 by Rt. Hy. Broughton, Esq. (b. 1829), who holds 926 acres in the shire, valued at £1890 per annum.—*Ord. Sur.*, sh. 25, 1865.

Rowdill. See Harris.

Roxburgh, a village and a parish of N Roxburghshire. The village, near the left bank of the Teviot, has a station, Roxburgh Junction, on the North British railway, 7⅛ miles NNE of Jedburgh, 8½ E by S of St Boswells, and 3 SW of Kelso. It is an ancient but decayed place, with a post office, having money order, savings' bank, and railway telegraph departments.

The parish, containing also Heiton village, is bounded N and E by Kelso, S by Eckford and Crailing, SW by Ancrum, W by Maxton, and NW by Makerstoun. Projecting a long, narrow south-western wing, it has an utmost length from NE to SW of 7⅝ miles, a varying width of 3 furlongs and 3⅝ miles, and an area of 7924⅝ acres, of which 143¾ are water. The Tweed, here a splendid salmon river, curves 4⅝ miles north-eastward along all the north-western and northern border; and the Teviot, entering from Eckford, flows 4 miles north-north-eastward—for the last 1⅜ mile along the Kelso boundary—until, ¼ mile above its influx to the Tweed, it passes off into Kelso parish. Near the village it is spanned by a lofty railway viaduct of fourteen arches. In the NE extremity of the parish the surface declines to 100 feet above sea-level; and thence it rises to 212 at Roxburgh Castle, 368 at Ladyrig, 550 at the Eckford boundary, 383 near Moorhouse, and 663 at Down, Doune, or Dunse Law. The western and southern borders, at one time moorish, have for many years been brought under the plough. In almost every corner the eye is presented with objects which nature and art seem vying how best to adorn. Hedgerow enclosures, rows of trees, clumps and groves upon knolls and rocky hillocks, and curvatures of slope, render the landscape rich and beautiful. A tourist travelling eastward along the highway, a little W of the ancient castle, moves along the summit of a precipice lined with trees, and sees, immediately on his left, through the little vistas of the wood, the majestic Tweed rolling far below him, 'dark, drumlie, and deep;' and, at a little distance on the right, the Teviot, forced aside by a rocky wooded bank, and meandering round a spacious plain. Advancing a brief space, he loses sight of both rivers, and is ingulfed among wood in a hollow of the way. Speedily emerging from the gloom, he looks upon one of the fairest prospects in the world—the ducal castle and park of Floors, the splendid mansion and grounds of Springwood Park, the Tweed and the Teviot, each spanned by an elegant bridge, and, right before him, Kelso and its immediate environs in all their glory. From a spot in the village of Roxburgh, you look, on the one hand, along a valley 8 or 10 miles long, apparently all of it covered with trees, or but thinly diversified with glade and dwelling; whilst, on the other hand, is an open and very diversified prospect of double the distance, away to the summits of

the Cheviot Hills. From a rising-ground near the southern boundary, the Teviot, after moving awhile in concealment behind overshadowing banks, rolls romantically into view, and instantly passes again into concealment. The summit of Dunse Law, anciently a station of strength, commands by far the most extensive and interesting of the local prospects—one so large, so rich, so crowded with objects, including all the elements of rural landscape, three renowned castles, and a peep at the German Ocean, as to defy succinct description. Caves of considerable extent and of curious forms, once used as places of concealment, occur on the banks of the Teviot. An immense natural dam, called the Trow Craigs, consisting of trap rock, lies across the Tweed, but has been worn by the river into four slits, which, when there is no flood, admit in separated currents the entire volume of water. Two of these slits are 34 feet deep, and so narrow that a person may bestride them; and they and the other gullets have a length of 450 and a descent of 16 feet. They form eddies and rapids, and offer to the current alternate accelerations and obstructions, which at all seasons occasion a loud noise, and, at the breaking up of the ice, create a tremendous roar, resembling the cry of the tempest-lashed sea. The principal rocks are traps and sandstones, little suited for building purposes. Two springs near the Tweed have a remarkable petrifying power. Much of the peninsula between the Tweed and the Teviot is so stony as to have given rise to a tradition, that it was once all covered with town. The soil of the parish is in some parts a mossy mould, in some a gravelly or sandy alluvium, in some a fine fertile loam. About 1750 acres are in pasture; nearly 230 acres are under wood; and almost all the remainder is in tillage. The great Roman road, called Watling Street, runs 1¼ mile along all the Ancrum boundary, and was used here till comparatively recent times as a drove road for cattle. The strongly-vaulted basement-story of a fortalice, variously called Roxburgh, Sunlaws, and Wallace Tower, the subject of many legends, and seemingly one of a chain of strengths between Roxburgh Castle and Upper Teviotdale, stands between the village of Roxburgh and the Teviot. Vestiges of camps and trenches appear in several localities; and traces of villages and malt steeps, with other memorials of inhabitation, indicate the population to have formerly been very considerable. Mansions are Sunlaws and Fairnington; and there are five proprietors besides the Duke of Roxburghe, who holds fully one-half of the entire rental. Roxburgh is in the presbytery of Kelso and the synod of Merse and Teviotdale; the living is worth £370. The parish church, at the village, was built in 1752, and contains 400 sittings. In the churchyard is the grave of Andrew Gemmels, the 'Blue gown, Edie Ochiltree,' of Sir Walter Scott's *Antiquary*, who 'died at Roxburgh Newtown in 1793, aged 106 years.' Three public schools—Fairnington, Heiton, and Roxburgh—with respective accommodation for 83, 78, and 123 children, had (1884) an average attendance of 26, 60, and 73, and grants of £27, 17s., £47, 7s., and £52, 11s. Valuation (1864) £10,441, 3s. 8d., (1885) £13,364, 3s. 8d., *plus* £2948 for railway. Pop. (1801) 949, (1831) 962, (1861) 1178, (1871) 1053, (1881) 1012.—*Ord. Sur.*, sh. 25, 1865.

Old Roxburgh stood over against Kelso, on a rising-ground at the W end of the low fertile peninsula between the Teviot and the Tweed, 2 miles NNE of the village of Roxburgh, from which one approaches it by a beautiful walk by the side of the Teviot. It is now quite extinct. Brief and obscure notices by various historians indicate that it was a place of considerable note long before the 12th century; but they fail to throw light on its condition, and do not furnish any certain facts in its history. While David I., who mounted the throne in 1124, was yet only Earl of Northumberland, the town, as well as the castle, belonged to him as an appanage of his earldom, and appears to have been so flourishing that it could not accommodate the crowds who pressed into it to enrol themselves its citizens. An overflow of its population was the occasion

of the erection of the new town, the original of the present village. Whether the new town was founded by David or at a period even more remote is uncertain; but the fact of its being so early an offshoot strikingly evinces how great a seat of population was the district at the mouth of the Teviot in even rude and semi-barbarous times. Among other elements of the old town's importance in the first half of the 12th century, it possessed an encincturing fortification of wall and ditch, and had its three churches and schools, which David gave to the monks of Kelso Abbey. When he ascended the throne, it became, as a matter of course, a royal burgh—one of those 'Four Burghs' (the others being Edinburgh, Berwick, and Stirling) whose burghal parliament still exists as the Convention of Royal Burghs. But its main feature was its ancient castle, supposed to have been built by the Saxons while they held their sovereignty of the Northumbrian kingdom, and long a most important fortress, a royal residence, a centre of strife, an eyesore to every great party who had not possession of it, and at once the political glory and the social bane of Teviotdale. Only a few fragments of some of its outer walls remain—on a tabular rock which rises about 40 feet perpendicular from the level of the plain; but these distinctly indicate it to have been a place of great strength. It was for ages a focus of intrigue and pomp and battle; it witnessed a profusion of the vicissitudes of siege and strife, of pillage and fire and slaughter; but now—

> 'Roxburgh! how fallen, since first, in Gothic pride,
> Thy frowning battlements the war defied,
> Called the bold chief to grace thy blazoned halls,
> And bade the rivers gird thy solid walls!
> Fallen are thy towers; and where the palace stood,
> In gloomy grandeur waves yon hanging wood.
> Crushed are thy halls, save where the peasant sees
> One moss-clad ruin rise between the trees,—
> The still green trees, whose mournful branches wave,
> In solemn cadence o'er the hapless grave.
> Proud castle! fancy still beholds thee stand,
> The curb, the guardian, of this Border land,
> As when the signal flame that blazed afar,
> And bloody flag, proclaimed impending war,
> While in the lion's place the leopard frowned,
> And marshall'd armies hemmed thy bulwarks round.'

Old Roxburgh was governed by a provost and bailies; it had a burgh or city seal; and it was the seat of a royal mint, at least in the reigns of William the Lyon and James II. It also very early had a weekly market and an annual fair—the latter the original of the great fair of St James which continues to be held on its site, and now belongs to Kelso. In 1368 it was subject to Edward III. of England, and received from that monarch a confirmation of its privileges as a burgh; and in 1460, having again come under the power of the Scottish crown, it was, in punishment of its disloyalty, denuded of its honours, and struck from the list of Scottish burghs. It was, as a town, more or less affected by nearly all the vicissitudes which befell its castle; and at many periods, particularly in the years 1369 and 1460, it was burned by hostile armies. It is said to have been, for some time, the fourth town in Scotland in both population and general importance. Near it, on the Teviot side, at a place which still bears the name of Friars, is the site of a convent of Franciscan monks. In the vicinity stood also a Maison Dieu or hospital, for the reception of pilgrims, and of the diseased and the indigent. David I. spent much time at the town and castle of Roxburgh, partly in the way of ordinary residence, and partly in the way of conducting hostilities with England. William the Lyon, under the misfortunes of war, delivered up the castle of Roxburgh to Henry II. of England (1174), but received it back from Richard I.; and he afterwards held his court here, and sent forth forces hence to quell insurrections among his subjects so far N as the province of Moray. Alexander II. resided much at Roxburgh, and was married here in 1239. Alexander III. was born at Roxburgh two years later, and afterwards, at two periods, was shut up in it by turbulences amongst his nobles; and here in 1255 he welcomed his father-in-law, Henry III. of England.

Roxburgh Castle was affected by the first movements of Edward I. against Scotland, and continued to figure prominently in most of the leading events throughout the Wars of the Succession. During the interregnum, the public writings and records had been transmitted from Edinburgh to Roxburgh, where the auditors appointed for Scottish affairs by Edward I. held their assemblies. In 1295 John Baliol consented that Roxburgh, with Berwick and Jedburgh, should be delivered to the Bishop of Carlisle, as a pledge of adherence to the interests of Edward. In September 1292 Edward himself resided at Roxburgh; and four years afterwards, in punishment of some resistance to his claims, he took formal military possession of the castle. In 1297 an unsuccessful attempt was made by the Scots to retake it; but on Shrove-Tuesday 1313, the castle was surprised and captured by Sir James Douglas, while the garrison were indulging in riot. In 1332 Edward Baliol got possession of the castle of Roxburgh, and here acknowledged Edward III. of England as his liege lord, surrendering to him the independence of Scotland, and alienating the town, castle, and county of Roxburgh as an annexation to the crown of England. Edward III. spent some time in Roxburgh Castle, and twice celebrated his birthday here. On Easter Day, 1342, Sir Alexander Ramsay of Dalhousie took the castle by escalade (see HERMITAGE CASTLE); but in 1346 the English regained possession of it after the battle of Hexham. In 1355 Edward III. of England again resided here; and Edward Baliol, who attended him as a vassal, made here a formal and more absolute surrender to him than before of the crown rights of Scotland, degrading himself so far as, in token of submission, to present him with the Scottish crown and with a portion of the Scottish soil. In 1398, during a truce, the Earl of Douglas' son, with Sir William Stewart and others, taking advantage of the critical situation of Richard II., broke down the bridge at Roxburgh, plundered the town, and ravaged the adjacent lands. In 1411 Douglas of Drumlanrig and Gavin Dunbar adopted the same course of hostility; for they broke down the bridge of Roxburgh, and set fire to the town. James I.'s vain attempt to recover this fortress in 1435 is naïvely described by Bellenden:—'The king past with an army to sege the castell of Marchmond, that is to say Roxburgh. The Scottis war nowmerit in this army to II.C.M. men, by [besides] futmen and caragemen. At last quhen the kyng had lyne at the sege foresaid xv. dayis and waistit all his munitioun and powder, he returnit haim, but [without] ony mair felicité succeeding to his army.' In 1460 James II.—perhaps from the thought of its shaming the Scottish crown, that Berwick and Roxburgh should continue so long under English dominion—laid siege to the latter, with a numerous army, well-furnished with artillery and warlike machinery. He had taken the town, and levelled it to the ground; but on 3 Aug., during the siege of the castle, while he was watching the discharge of a cannon, of so great a calibre, that it was called the 'Lion,' it burst, and the king was almost instantaneously struck dead. A yew tree, planted by the late Duke of Roxburghe, marks the spot where he fell. On receiving the mournful tidings the Queen, Mary of Gueldres, hurried to the camp with her eldest son, a boy of eight years of age. She conducted herself with such heroism as to inspire the troops with redoubled energy; and the garrison, finding themselves reduced to extremities, surrendered the fortress. 'That the place,' says Ridpath, 'which the English had held for more than a hundred years, might thenceforth cease to be a centre of rapine and violence, or a cause of future strife between the nations, the victors reduced it to a heap of ruins.' In this dismantled state did it remain till the English army, in 1547, under the Protector Somerset, encamped on the plain between the ruins of Roxburgh Castle and the confluence of Tweed and Teviot. Observing the strength and convenience of the situation, he resolved to make the fortress tenable. This he did, and left in it a garrison of 300 soldiers and 200 pioneers, under Sir Ralph Bulmer. While the English were at Roxburgh, a great number of the Scottish gentry in this district came into the camp, and made their submission to Somerset, swearing fealty to the King of England. In 1499 Walter Ker of CESSFORD obtained from James IV. a grant of the site of the ruined town and castle. Robert, his fifth descendant, received the title of Baron Roxburghe in 1600, and of Earl of Roxburghe in 1616; and in 1707 the fifth Earl was created Duke of Roxburghe. See FLOORS CASTLE, KELSO, and works cited under the latter article.

Roxburghshire, an inland county in the middle of the Scottish marches, and perhaps the most characteristically Border county of all, lies between 55° 6′ 40″ and 55° 42′ 52″ N lat., and between 2° 11′ and 3° 7′ 50″ W long. It is bounded on the N by Berwickshire, E and SE by England, SW by Dumfriesshire, and W by Selkirkshire and a southerly projection from Edinburghshire. Its greatest length, from the point where the Tweed issues from the county in the N to the extreme SW, is 42 miles; its greatest breadth, from E to W, is 30 miles; and its total area is 669·5 square miles or 428,493 acres, of which 2836 are water. Roxburghshire is the thirteenth county of Scotland in point of size, and the seventeenth in point of population. Its outline is irregular; but its shape may be described as a rough rectangle, 17 or 18 miles by 35 to 40, lying from NE to SW along the English border, with a narrow peninsula, 10 or 12 miles long, protruding from its northern side. The boundary line runs from the Tweed at Carham Burn southwards to the Cheviot Hills on the English border; thence turns to the SW along a series of watersheds between the two countries, past Carter Fell and Peel Fell, to Kershope Water, which carries it on to the SW extremity at Liddlebank. Thence the line turns almost due N along the E border of Dumfriesshire; but at Tudhope Fell bends suddenly westwards, and after a circuit trends NW in an exceedingly irregular and arbitrary course to the sources of the Elwyn, which marks the N limit of the county. Thence turning eastward for a few miles, it strikes the course of the Leader, and with one indentation follows it southwards to the Tweed at Makerstoun. From this point it follows along the course of the Tweed, making, however, two considerable loops northwards, to include Smailholm and Makerstoun, and Ednam and Stitchel, before it once more reaches Carham Burn. This line throughout most of its circuit, entirely disregards all geographical and natural boundaries, and its irregularities and divergences are perplexingly capricious. Three districts of the county are geographically separated from its main body. The first of these lies N of the Tweed, between the rivers Gala and Leader, and belongs naturally to Lauderdale. It contains only part, though the larger part, of the parish of Melrose. The second district also lies N of the Tweed, from a line about 3 miles E of the Leader to the NE boundary; and belongs naturally to the Merse. It embraces the parishes of Smailholm, Makerstoun, Stitchel, Ednam, and part of Kelso. The third district consists of the triangular projection in the extreme SE, and is separated from the main body by a continuous mountain watershed. It is drained by the river Liddel, whence it receives the name of Liddesdale, and comprises the large parish of Castleton. The main body of Roxburghshire amounts to 14 or 15-20ths of the whole area, and consists chiefly of the basin of the Teviot. It bears the general name of Teviotdale, which, indeed, is sometimes used as synonymous with Roxburghshire. This district surrounds a small isolated portion of Selkirkshire, and gives off to the main body of that county some little districts drained by tributaries of the Teviot; while it includes a western district on the Tweed, sending no affluent to the Teviot, with two or three eastern pendicles drained by Bowmont Water and other streams into Northumberland.

Surface.—The surface of the two divisions N of the Tweed and of the whole northern part of Teviotdale, is, as compared with the rest of the county, decidedly

champaign—undulating and even boldly variegated, but in no place rising into heights, except in the Eildon Hills behind Melrose, the Penielheugh, the Dunian, the Minto, and the Ruberslaw Hills. The Merse district is almost level; while on the S bank of the Tweed there extends a sort of rolling plain. Everywhere, but especially near the Tweed, this region is highly farmed and extensively adorned with trees. The county S of this united district is, in a general view, all hilly, and over a great extent mountainous. The vales and hanging plains within the basin of the Teviot follow the course of that stream or its tributaries, and whether they have narrow bottoms or sloping braes, are either under tillage or covered with sheep, or profusely adorned with wood. The heights are all beautiful and rounded in aspect, though those which overhang the upper Teviot and Liddesdale valleys are more boldly mountainous, and in some instances moorish, barren, and bleak.

Mountains.—The chief mountains of Roxburghshire are those of the Cheviot range, which extends along the S border from Yetholm parish to Craik Hill, near the source of the Borthwick border. The highest summits in this range within the county, from E to W, are the Schel (1978 feet), Auchopecairn (2382), Hounam Law (1464), Grindstone Law (1535), Arks Edge (1469), Carter Fell (1899), Peel Fell (1964), and Larriston Fells (1677). A projection of the Cheviots strikes westward from a point about 20 miles SW of Auchopecairn, and forms the mutual boundary between Teviotdale and Liddesdale, and thence extends NW across the south-western border of Teviotdale into junction with the southern Highlands, which extend across Scotland from the coast of Berwickshire to the coast of Ayrshire. On the watershed between Teviotdale and Liddesdale the chief summits are Wheelrig Head (1465 feet), Carlin-tooth (1801), Needslaw (1457), Fanna Hill (1643), Winburgh (1662), Leap Steel (1544), Maiden Paps (1677), and Skelfhill Fell (1749); while on the Dumfriesshire border rise Watch Hill (1642), Roan Fell (1839), Din Fell (1735), Tudhope Hill (1961), Wisp Hill (1951), Whitehope Edge (1506), and Craik Cross Hill (1481). Other summits and hills within the county are Ruberslaw (1392 feet) between the Teviot and Rule, with Minto Crags (700) on the opposite bank of the former river, while to the NW rise the two rounded summits of Minto (905). East of the Rule, and between the Teviot and Jed, rises the Dunian (1095 feet), overhanging Jedburgh; and immediately N of the point where these two rivers join stands Penielheugh (700). Dunlaw (663 feet), near the scene of the battle of Ancrum Moor, is surmounted by the ruins of an observatory built by Baron Rutherford of Fairnington, and now locally known as 'the baron's folly.' Near Melrose rise the three Eildons (respectively 1385, 1327, and 1216 feet), commanding a lovely and extensive view. In the range of hills that extends westwards from this point towards Selkirk, the chief summits in Roxburghshire are Bowden Moor (933 feet), Cauldshiels Hill (1076), and Whitlaw Kip (1059). In the small peninsula part of the shire N of the Tweed and between the Gala and the Leader the chief hills are Buckholm Hill (1064 feet), William Law (1315), and Sell Moor (1388). Other hills, worthy of notice from their associations if not from their size, are Skelfhill Pen, Pencrestpen, Pencrest, and Burgh Hill, in the W part of Cavers parish; Nine Stane Rig in Castleton, where one of the Soulis family is said to have been boiled alive by the men of Teviotdale on account of his cruelty; the Hermitage Hills, with the castle of the same name; Billhope Braes, famous for 'bucks and raes;' Carby Hill, between the Liddel and Kershope Waters; and the Chesters in Southdean parish.

Streams.—Roxburghshire is perhaps only excelled by Perthshire among the counties of Scotland for the number and picturesque beauty of its streams; but the rivers of the southern county are even more celebrated in song than those of the northern. The chief stream, both in bulk and in beauty, is the Tweed, which enters the county from Selkirkshire about 2 miles below the burgh of Selkirk, and leaves it after a beautiful course of 30 miles at the influx of Carham Burn on the NE border. The course of this river in the county is towards the NE across the northern part of the shire, and for a considerable distance it forms the boundary with Berwickshire. All the other main streams of Roxburghshire flow directly or ultimately into the Tweed. The chief affluents of that river in the county on the left or northern bank are the Gala, which forms part of the western border of the shire; Allan Water; the Leader, which separates Roxburghshire from part of Berwickshire; and not far from the point where it leaves the district, Eden Water. On the right or S bank the main tributaries of the Tweed are the Ettrick, which touches the county only for a mile or two on the western border; and the Teviot, which joins the Tweed at Kelso. The Teviot is the second river in Roxburghshire, and its whole course lies within the county limits. It rises in the Fanhill, one of the hills which separate Roxburghshire from Dumfriesshire in the SE, and thence it flows NW in a line parallel to the main axis of the shire for about 40 miles, until it falls into the Tweed at Kelso. On its left bank it receives the Borthwick and Ale Waters; and on its right bank the Allan, Slitrig, Rule, Jed, Oxnam, and Kale. Borthwick Water is formed by the junction of the Craik Hope, Howpasley, and Wolfcleugh Burns, and has a course of 16 miles. The Ale flows for 24 miles in a winding course before it joins the Teviot. The Allan has a short course of only 5 miles; it supplies the town of Hawick with water. The Slitrig, which joins the Teviot at Hawick, is an impetuous stream subject to floods. The Rule is formed by the junction of the Wauchope, Harwood, and Catlee Burns, and has a course of 9¼ miles, for the most part through a narrow wooded glen. The 'crystal Jed' rises on the Liddesdale border, and receives on its course of 21¾ miles the Black, Carlee, White, Shaw, Edgerston, and Pier Burns. The Oxnam flows 9¾ miles before entering the main stream; and Kale Water falls into the Teviot at Kalemouth, after a sinuous course of 20¼ miles, during which it is joined by Cessford Burn and other small affluents. The Liddel, receiving on its right bank the Hermitage and Tinnis, and on the left the Black Burn, Larriston Burn, and the Kershope, crosses the Scottish border, and after a course of 26¾ miles joins the Esk below Canonbie. In the E of the shire the Bowmont Water runs northwards, and crosses the border in Yetholm parish to join the Till in England.

The lakes of the county are both few and small. Primside or Yetholm Loch, in Morebattle parish, is about 1½ mile in circumference; it is thought to have been connected with the former Linton Loch, now drained, close by. Hoselaw Loch is in Linton parish. Cauldshiels Loch, about a mile in circumference, is situated on the Abbotsford property, and is surrounded by trees planted by Sir Walter Scott. Huntly Burn flows from this lakelet through the Rhymer's Glen, a favourite haunt of Thomas the Rhymer. Petrifying streams occur in the parishes of Roxburgh, Minto, and Carleton; mineral springs in Jedburgh, Oxnam, Crailing, St Boswells, and Castleton; and 'consecrated' wells, as St Helen's, St Robert's, and St Dunstan's, in the neighbourhood of Melrose.

Geology.—The geological history of Roxburghshire presents several features of special interest to the geologist, partly from the remarkable development of the older Palæozoic rocks and partly from the relations of the Calciferous Sandstones along the border to the Carboniferous system in the N of England. The various formations represented in this county are given in the following table:—

Recent and Pleistocene.		Peat and alluvium. Glacial gravels. Kames. Boulder-clay with inter-glacia beds.
Carboniferous.		Calciferous Sandstone series.
Old Red Sandstone.	Upper.	Conglomerates and sandstones with fish remains.
	Lower.	Intercalations of sandstones and conglomerates with the contemporaneous volcanic rocks of the Cheviots.

Silurian.	Upper.	Wenlock beds.	
	Lower.	Caradoc.	Queensberry Grits.
		Llandeilo.	Moffat Black Shale Group.
			Ardwell Group.

IGNEOUS ROCKS.

Contemporaneous.	Porphyrites, tuffs, etc., of Lower Carboniferous age.
	Porphyrites, tuffs, etc., of Upper Old Red Sandstone age.
	Porphyrites, tuffs, etc., of Lower Old Red Sandstone age.
Intrusive.	Basalt dykes of Tertiary age.
	Diabase, Basalt, Porphyrite, and volcanic necks of Carboniferous age.
	Minette and Granite, Post Upper Silurian and Lower Old Red Sandstone age.

Beginning with the Lower Silurian rocks, which are the oldest sedimentary strata in the county, we find that they cover an extensive area lying to the W of a line drawn from Old Melrose, S by Kirkton, to the sources of the Teviot. According to the classification adopted by the Geological Survey, the strata forming the Ardwell Group, consisting of yellow and brown tinted greywackes and shales, are regarded as the oldest members of the Lower Silurian formation in the S of Scotland. Though probably of no great thickness, yet by reason of innumerable folds they extend from the sources of the Teviot N to near Abbotsford, where they are succeeded by the representatives of the Moffat black shales. Disregarding minor folds, the members of this group are arranged in a gentle arch, the axis of which runs more or less parallel with the Teviot along a line about 1 mile to the N of that stream. The overlying black shales are admirably exposed in 'the Rhymer's Glen' near Melrose, whence they can be traced in a SW direction to the bridge spanning the Ettrick at its point of junction with the Tweed. At the former locality there is evidence of excessive crumpling and crushing of the beds, but, nevertheless, it is apparent that the zones present considerable variations compared with their development in the typical Moffat area. Indeed, some of the fossiliferous bands have disappeared, and it is also observable that the black shales which do occur, are associated with greywackes and shales—a feature common to the Selkirkshire area (see article on geology of Selkirkshire, same vol., p. 333). To the N of the line indicated as the outcrop of the Moffat black shales, there succeeds a belt of flaggy greywackes and shales —the equivalents of the Grieston beds, and these are overlain in turn by the strong grit bands of the Queensberry series on the Meigle Hill near Galashiels in Selkirkshire.

The Upper Silurian rocks occupy several detached areas, the largest of which lies immediately to the S of the tract covered by the Ardwell beds, extending from the county boundary at Wisp Hill E by Stobs Castle, till they are overlapped by the Upper Old Red Sandstone. Other masses occur in the heart of the Old Red Sandstone and Carboniferous areas, and of these, the most important is traceable from near Riccarton NE to near Hobkirk—a distance of 14 miles. Throughout these areas, the strata are as much folded and contorted as the Lower Silurian rocks, and hence there is a constant repetition of the same beds. Along the N limit of the tract bounding the Ardwell Group, about 3 miles S of Hawick, the lowest beds consist of grits, which are rapidly succeeded by shales containing a thin band crowded with graptolites and orthoceratites. These are followed by greenish-grey greywackes and shales forming the dominant members of the series, occasionally containing a band of fossiliferous shales similar to that just indicated. Zones of pebbly grit and conglomerate, yielding casts of shells, encrinites, etc., are frequently met with. Excellent sections of the highest beds of the series are exposed in the railway cuttings near Riccarton.

The representatives of the Lower Old Red Sandstone consist almost wholly of contemporaneous volcanic

rocks, and cover an area of about 80 square miles on the Cheviots. Before the outburst of volcanic activity during this period, the Silurian rocks had been plicated and subjected to a vast amount of denudation. Wherever the unconformable junction is exposed, the lavas and tuffs rest on the upturned edges of the Silurian strata, so that a long interval of time must have elapsed between the close of the Upper Silurian period and the earliest volcanic eruptions of the Lower Old Red Sandstone in this region. The oldest member of the volcanic series in Roxburghshire consists of a coarse agglomerate or tuff exposed on the hill slopes E of Hindhope at the head of Kale Water, where it rests on the Upper Silurian greywackes and shales. Sheet after sheet of porphyrite succeeds this basal tuff, the whole series being inclined at a gentle angle to the SE. Few intercalations of tuff are associated with these ancient lavas, but occasionally thin seams of chocolate-coloured sandstone are met with, thereby indicating that the area had subsided beneath the waters of the Old Red Sandstone lake. An excellent example of the alternation of sandstones and lavas occurs on the Kale Water, about 4 miles S of the village of Hounam. Some of the bands still retain their original glassy matrix, as, for example, at Cocklanfoot in the neighbourhood of the Big Cheviot and near Morebattle on Kale Water. A few volcanic necks pierce these porphyrite lavas, occurring chiefly round the Big Cheviot.

That the volcanic series just described was highly denuded before the deposition of the Upper Old Red Sandstone is evident from an examination of the boundary line between the two formations, and also from the character of the conglomerate at the base of the Upper Old Red strata. The latter fills up bays and hollows cut out of the ancient lavas, while the included pebbles of the basal conglomerate, where it flanks the volcanic area, are composed mainly of trappean fragments. Far to the W, even, where no Lower Old Red lavas or tuffs are now to be found, as, for instance, S of Hawick, there is a larger number of blocks of Cheviot porphyrites in the conglomerates than Silurian fragments.

Nearly one-third of the county is made up of Upper Old Red strata. A line drawn from Newtown St Boswells to Kirkton, thence to Edgerton, Kelso, and back to St Boswells, encloses the largest mass of this formation. To the SW of this area long tongues of Upper Old Red Sandstone fill old valleys carved out of the older rocks, while another narrow belt skirting the Cheviot volcanic rocks extends from Crailing to the English border on the S side of the Tweed. The oldest member of this formation consists of a coarse conglomerate resembling a boulder clay, filling up old hollows and river courses in the older rocks. The greatest development of this deposit occurs in Lauderdale, where, owing to the smoothed edges of the included blocks and their irregular arrangement, it is sometimes difficult to tell the boundary line between it and the overlying boulder clay. Overlying this conglomerate we find a great development of marls and sandstones forming the prominent beds of this formation. They are admirably exposed in the Tweed from St Boswells to Rutherford, in the Ale Water near Ancrum, and in the Jed Water near Kelso. From the sandstone bands in these sections, fish remains have been obtained, comprising *Holoptychius nobilissimus* and *Pterichthys major*. In Belses quarry near Ancrum, *Palæopteris Hibernica* is said to have been found.

Along the N border of the county the Upper Old Red Sandstone attains its greatest development; and near the upper limits of the formation near Smailholm, a thin band of porphyrite lava is intercalated with the red sandstones—evidently the first indication of the Kelso volcanic rocks. The latter form an important horizon between the Upper Old Red Sandstone and the overlying Calciferous Sandstones in Roxburghshire. From the N border of the county near Stitchel, where they pass into Berwickshire, these ancient lavas, composed of diabase-porphyrites, can be traced W to Smailholm, thence across the Tweed to Makerstoun, causing

the gorge known as 'the Makerstoun trows' (troughs). From this point the volcanic belt can be followed E along the S side of the Tweed as far as the county boundary. This volcanic zone, represented by a few bands of slaggy diabase with an overlying bed of tuff, occurs in the neighbourhood of Riccarton, coming to the surface wherever this horizon is exposed. Between this point and Kelso the volcanic rocks are absent, the Calciferous Sandstones resting directly on the Upper Old Red Sandstone. It reappears, however, in the Dinley Burn, a tributary of the Hermitage Water, and can be traced across the watershed to the Tarras Water.

An interesting feature connected with this development of volcanic activity at the base of the Calciferous Sandstones, is the number of necks or volcanic orifices throughout the county. Some of these undoubtedly supplied the volcanic rocks belonging to this horizon, while others probably acted as blowholes for the discharge of triturated materials. An excellent example occurs at Melrose, and in the quarry near the station there is a capital section of the material filling the vent. A glance at the Geological Survey maps of the county (sheets 11, 25, 26 of the 1-inch map) will show the distribution of these old centres of eruption. Black Law, Down Law, Dunian Hill, Rubers Law, the Maiden Paps, are all examples of the cores of Lower Carboniferous Cones.

There are two areas of Carboniferous rocks in the county—one in the extreme NE part, extending from near Kelso to the Merse of Berwickshire; the other, and larger area of the two, runs along the English border from a point where the road crosses from Jedburgh to Redesdale, to near the junction of the Liddel with the Esk. The latter covers the greater part of Liddesdale and the surrounding heights, culminating in the Peel, Carter, and Larriston Fells. In the former area, the strata form the rim of the Carboniferous basin of the Merse of Berwickshire. As already indicated, they overlie the volcanic belt at Kelso, and consist of blue, red, and green clays, white and blue cement-stones, flaggy sandstones, and occasional bands of calcareous conglomeratic sandstone, dipping away at gentle angles from the ancient lavas. It is evident, therefore, that they resemble the type of the Cement-stone series as developed in Midlothian.

The relations of the Carboniferous rocks of Liddesdale to those in the N of England will be discussed in the general article on the geology of Scotland. Even in this limited area there are considerable variations in the order of succession of the strata when traced along the strike. Beginning with the section in Lower Liddesdale we find that the beds overlying the volcanic zone at the base of the Calciferous Sandstones consist of sandstones, well seen on the Whita Hill above Langholm, followed by cement-stones consisting of blue and green clays, shales, and calcareous sandstones. Near Newcastleton there is a volcanic zone occupying the horizon of the famous scorpion bed at Langholm. (See article on geology of Dumfriesshire, *Ord. Gaz.*, vol. ii., p. 398.) A second horizon of slaggy basalt occurs a little higher up in the series, just above the lowest beds of the Fell Sandstones, which form the next subdivision of the Calciferous Sandstones of Liddesdale. In the lower districts the base of this group is represented by a coarse sandstone seen at Kershope Foot, thickening out towards the E, and forming the Kidd's Linn Sandstone of Upper Liddesdale. The basalt zone of Caerby Hill comes next in order, followed by strata resembling the underlying Cement-stone group, with a band of fine tuff and some thin coal seams, the whole series being overlain by the Larriston Fell Sandstones—the highest beds in this part of the county. Along this horizon, however, to the W there is a gradual increase in the number of bands of marine limestone, the equivalents of the Penton Limestone group, and perhaps the lower part of the Canonbie Coalfield. The upper part of the latter coalfield is probably on the same horizon as the Plashetts Coalfield, which is high up in the Fell Sandstone group.

In Upper Liddesdale the succession is not so varied. The white sandstones at the base are replaced by cement-stones and clays, the whole of the upper part of the valley being carved out of these strata, and they are also traceable high up on the flanks of Peel Fell. Thick beds of sandstone alternate with the upper part of the series, and these are overlain by the great group of the Fell Sandstones. Underneath the latter there is a thin seam of coal, the outcrop of which can be followed for some distance.

Between Hawick and Selkirk some dykes of minette and mica trap occur, having a NNE and SSW trend, which are only found in the Silurian rocks. As they do not pierce any rocks later than the Upper Silurian, they are supposed to have been intruded either during Ludlow or Lower Old Red Sandstone time. Pink felsite is found in dykes, and also in the form of sheets, as in the Eildons and the Black Hill of Earlston. As these sheets penetrate the Silurian and Upper Old Red Sandstone, they are probably associated with the volcanic activity in the Lower Carboniferous period. Sheets and masses of intrusive basalt belonging to the same period occur, and bosses of porphyrite are also associated with the volcanic orifices. Basalt dykes of Tertiary age are met with, one of which crosses the county from E to W, passing through Hawick, where it is known as 'the Yethan dyke' (*i.e.*, Cast Iron dyke).

The glacial phenomena of the Border county will be discussed in the general article on the geology of Scotland.

Economic Minerals.—The calcareous bands in the Calciferous Sandstone series have been wrought for lime in Liddesdale, as, for instance, at Tholieshope. Some of them yield an excellent marine cement, but those at present quarried are used for mortar and for agricultural purposes. The white sandstones at the base of the series in Lower Liddesdale form an excellent building stone. The coarse sandstone at Kershope Foot has also been worked. One of the thick beds of sandstone in the Cement-stones of the upper part of the basin has been worked at the Dead Water, and has been extensively used for building purposes in the Border towns. In the E part of the county the harder bands of the Upper Old Red formation, as well as the grits in the Silurian series, are used for similar purposes.

Soil.—The soil of the arable lands is partly light and partly heavy. The former consists of rich loam, or of mixtures of sand and loam, gravel and loam, or sand, gravel, and clay, on various subsoils, and occurs generally on low or level lands in the vales of the streams. In some cases it is also found on eminences of considerable height, especially in the parishes of Linton, Eckford, Crailing, Ancrum, Maxton, and Melrose. The heavy soil consists chiefly of clay or clay mixtures lying upon till or other retentive subsoils. It occurs mostly on the high arable lands; it rarely appears in the valleys except on a dry bottom or alternating with light soil. It forms a considerable aggregate in the parishes on both sides of Tweed around Kelso; it covers an area 10 miles by 4, comprising nearly all Bowden, Lilliesleaf, and Minto parishes, and parts of the parishes on the northern border of these. Over one-half of that area it is deep and fertile; but over the other it is cold and shallow and uncertain in production, and is therefore largely devoted to plantation. The pastoral lands have either dry, wet, or heathy soils. The first prevails all eastward of the Jed, is interspersed with some small patches of heath and a few small drained marshes, and in general has a thick sward of rich sweet grass. Wet soil prevails from the SW skirts of Ruberslaw to the confines of Liddesdale, and consists there of stubborn clay upon impenetrable till. Within Liddesdale it is extensively intermixed with heath; and in all the region SW of the Jed, or from the SW skirts of Ruberslaw to the SW extremity of Liddesdale, it is prevailingly so wet as to render the land almost entirely pastoral. At the same time it isolates a considerable aggregate proportion of dry land, and includes spongy fields susceptible of great improvement by draining.

Climate.—The climate is temperate, but the eastern border is in winter exposed to violent snowstorms. The most copious rainfall in the county occurs in the mountains towards the SW and S. Very cold winds from the N and E prevail at certain seasons of the year.

Industries.—Besides the manufacturing industries which centre wholly in the towns and larger villages, according to the returns of 1881, 4793 of the male population were engaged in agriculture; 8347 in industrial employments; 815 in commerce; 9669 unproductive; and the rest variously employed. Roxburghshire carries on arable and pastoral farming, which indeed is the sole county industry. In early times the monks of the great abbeys were the chief cultivators of the soil in the county, and these contributed not a little to its civilisation and enrichment. Modern agricultural improvements began in Roxburghshire about the same time as in the other southern counties of Scotland. Before 1743, the practice of draining, enclosing, and fallowing, and of raising cabbages, flax, hemp, rape, and grass seeds, were generally introduced. In 1747, the practice of sowing turnips in the fields was introduced by Dr John Rutherford of Melrose; and by 1753 the culture was reduced to a regular system of cropping by Mr Dawson at Frogden. Potatoes were introduced as a field-crop in 1754; and next year lime and marl began to be used as manures, after the example of Mr Dawson and Sir Gilbert Elliot. Thenceforward the progress was rapid. Mr Wight, who made two agricultural surveys of the county, respectively in 1773 and 1780, declared, at the latter date, that 'he was amazed at the advances all had made since his former survey, as every field had assumed a better aspect from an improving hand.' In the 20 years, 1774-1794, the lands in the county became doubled in value, almost solely in consequence of ameliorations in husbandry. In the present century the shire has not lagged; and in certain districts the farmers of Roxburghshire are little behind those of the Lothians. According to the returns of 1881, there were 71 farms in the county of 1000 acres and upwards; 82 between 500 and 1000; 217 between 100 and 500; 35 between 50 and 100; and 60 below 50, of which 18 were below 10. The arable farms are mostly between 400 and 600 acres; those of larger extent being in most cases wholly or chiefly pastoral.

The following table exhibits the principal crops, and the acreage under each at various dates:—

	1868.	1877.	1882.	1884.
Wheat,	3,007	1,509	2,358	1,515
Barley,	13,327	16,472	15,007	13,355
Oats,	30,969	33,111	33,414	32,624
Potatoes,	2,199	1,846	2,133	2,118
Turnips,	25,596	26,531	26,045	25,143
Cabbage, etc.,	216	398	544	464
Other Green Crops,	450	522	573	660
Bare or Fallow,	540	..	249	310
Grasses in Rotation,	52,712	57,810	56,300	59,937
Permanent Pasture,	50,866	38,097	43,889	47,058

The above figures are exclusive of heath or mountain pasture. In 1884, 47 acres were in orchards; 47 in market-gardens; 53 in nursery grounds; and 14,679 in plantations and coppices, exclusive of garden shrubberies. The following table exhibits the quantity of live stock in the county at different dates:—

	1868.	1875.	1879.	1884.
Horses,	..	4,521	4,559	4,420
Cattle,	16,106	17,062	16,540	17,831
Sheep,	487,933	486,790	497,692	502,721
Pigs,	3,911	3,960	3,352	4,783

Among the other resources of the county, the valuable salmon-fisheries on the Tweed must not be overlooked. According to the *Sportsman's, Tourist's, and General Guide* for Oct. 1884, the annual value of fishings let in Roxburghshire was £2290; while the value of grouse and other shootings let was £2829. Very many of the other streams also contain excellent trout and other fresh-water fish; and perch and pike abound in the lochs. The main imports into the shire are lime, coal, foreign wool for manufacturing purposes, and articles for domestic consumption; and the exports are chiefly the manufactured products of the textile factories, and cattle and sheep, largely sent to England.

Roads and Railways.—Previous to 1764 the county was miserably provided with roads and bridges, and possessed but few reaches of roadway suitable for wheeled traffic. There were then only two good bridges across the Tweed, viz., at Melrose and Kelso; and only two across the Teviot, viz., at Hawick and Ancrum. But, between 1764 and 1797, no less than 153 miles of excellent road were formed; 2 bridges were rebuilt; 25 new stone bridges erected over the principal streams, besides large numbers of smaller erections over the minor streams and hollows. Within the present century a similar activity has prevailed; and now the county, except in its more mountainous parts, is amply provided with the means of interior communication. The Waverley Route of the North British railway, from Edinburgh to Carlisle, runs southwards for about 50 miles through the county, with stations at Galashiels, Melrose, St Boswells, Belses, Hassendean, Hawick, Stobs, Shankend, Riccarton, Steele Road, Newcastleton, and Kershope Foot. From Galashiels a branch extends to Selkirk, with stations at Abbotsford Ferry and Lindean; and another branch runs to Peebles, with stations in Roxburghshire at Clovenfords, Thornilee, and Walkerburn. From Newtown St Boswells Junction, one branch, known as the Berwickshire railway, runs with no Roxburghshire stations to Berwick; and another proceeds thither also, by the Tweed valley, with stations at Maxton, Rutherford, Roxburgh, Kelso, Sprouston, Carham, and Sunilaws, and sending off at Roxburgh Junction a short branch southwards to Jedburgh, with stations at Kirkbank, Nesbit, and Jedfoot Bridge. From Riccarton Junction on the main line a branch starts off westwards, passes the station of Saughtree before leaving the county, and leads *viâ* Hexham to Newcastle.

Towns and Villages.—The only royal burgh in Roxburghshire is Jedburgh (3402); Hawick (16,184) and Galashiels (12,435), which is partly in Selkirkshire, are parliamentary burghs; and the only other towns are Melrose (1550) and Kelso (5235). The villages with more than 300 inhabitants in 1881 were Ancrum, Darnick, Denholm, Gattonside, Lessudden, Lilliesleaf, Morebattle, Newcastleton, Newstead, Newtown St Boswells, Sprouston, and Yetholm. Other villages are Appletreehall, Ashkirk, Bedrule, Bonjedward, Bowden, Caverton, Cessford, Chesters, Crailing, Dean, Deanburnhaugh, Eckford, Ednam, Eildon, Heiton, Hownam, Lanton, Lempitlaw, Linton, Makerstoun, Maxton, Maxwellhaugh, Midlem, Minto, Nisbet (East and West), Rewcastle, Riccarton, Roxburgh, Rutherford, Smailholm, and Ulston.

Mansions.—Among the principal mansions and seats in the county are Floors Castle (Duke of Roxburghe), Branxholm (Duke of Buccleuch), Eildon Hall, Mount Teviot (Marquis of Lothian), Minto House (Earl of Minto), Hartrigge House, Mount Ulston (Lord Stratheden and Campbell), Harden (Lord Polwarth), The Pavilion, Stobs Castle, Wells, and Hallrule (Sir William Eliott, Bart.), Abbotrule, Abbotsford, Allerly, Ancrum House, Ashkirk House, Bonrig, Bonjedward House, Borthwickbrae, Borthwickshiels, Briery Yards, Brigend House, Broomlands, Bucklands House, Cavers, Cherrytrees, Chesters, Chisholm, Cotfield, Crailing House, Drygrange, Edenbank, Edenside, Edgerston House, Ednam House, Elliston House, Fairnington, Gattonside House, Hassendeanburn, Hendersyde, Holmes, Hoscote, Huntlyburn House, Jedbank, Jedfoot House, Kirkbank, Kirklands, Knowesouth, Ladhope House, Langlee, Langraw, Larriston, Lessudden House, Liddell Bank, Lintalee, Linthill, Lochside, Lowood, Makerstoun House, Max-

poffle, Menslaws, Newton House, Orchard, Ormiston House, Otterburn House, Pinnacle-hill, Priory, Redheugh, Riddell House, St Boswell's Bank, Samieston, Scaurs, Sillerbit Hall, Sinton House, Springside Park, Stirches, Stitchell House, Sunlaws, Sunnyside, Sydenham House, Teviotbank, Tweedbank, Wauchope, Weens, Wester Langlee, Whiterigg, Wilton Lodge, Wolfelee, Woll House, Woodside, and Wooplaw. According to *Miscellaneous Statistics of the United Kingdom* (1879), 423,463 acres, with a total gross estimated rental of £456,883, were divided among 2455 proprietors, the Duke of Buccleuch holding 104,461 acres (rental £39,458), the Duke of Roxburghe 50,459 (£43,820), one other 25,380 (£7995), two together 36,215 (£32,618), five 37,002 (£30,197), twenty-seven 85,139 (£74,992), thirty 42,903 (£48,780), thirty-two 23,396 (£56,704), etc.

Roxburghshire is governed by a lord-lieutenant, a vice-lieutenant, 2 deputy-lieutenants, a sheriff, a sheriff-substitute, 3 assistant sheriff-substitutes, and about 150 justices of the peace. Sheriff and other courts are held at Jedburgh periodically, as detailed in our article on that town; and at Kelso, Hawick, and Melrose. The county police force in 1884, exclusive of the forces at Hawick and Galashiels, comprised 40 men, and a superintendent with a salary of £300. The county prison is at Jedburgh. Hawick and Galashiels unite with Selkirk in sending a member to parliament; Jedburgh unites with Haddington, Dunbar, North Berwick, and Lauder for a similar purpose; and the rest of the county elects a member for itself, and had in 1884-85 a parliamentary constituency of 2018. The valuation of the county was (1674) £26,222, (1815) £254,180, (1855) £316,131, (1876) £420,161, and (1884-85) £421,520, inclusive of railways.

According to the census of 1881, Roxburgh had 80 inhabitants to the square mile, 19 counties being more densely populated; and the average for all Scotland being 125 per square mile. Pop. (1801) 33,721, (1811) 37,230, (1821) 40,892, (1831) 43,663, (1841) 46,025, (1851) 51,642, (1861) 54,119, (1871) 49,407, and (1881) 53,442, of whom 28,006 were females, and 25 Gaelic-speaking. Houses (1881) occupied 10,339, vacant 483, building 76.

The civil county contains 31 entire *quoad civilia* parishes, viz.:—Ancrum, Bedrule, Bowden, Castleton, Cavers, Crailing, Eckford, Ednam, Hawick, Hobkirk, Hownam, Jedburgh, Kelso, Kirkton, Lilliesleaf, Linton, Makerstoun, Maxton, Melrose, Minto, Morebattle, Oxnam, Roxburgh, St Boswells, Southdean, Sprouston, Stitchel, Teviothead, Wilton, and Yetholm; and parts of Galashiels, Selkirk, Ashkirk, and Roberton. Ecclesiastically, the county is distributed among 34 entire *quoad sacra* parishes, and parts of 5 others, all, except Castleton, in the presbyteries of Jedburgh, Kelso, Selkirk, and Earlston, all in the synod of Merse and Teviotdale. Castleton is in the presbytery of Langholm and the synod of Dumfries. There are in the shire 78 elementary day-schools (69 of them public), which, with total accommodation for 10,657 children, had (1883) 9229 on the registers, and an average attendance of 7231. All the parishes are assessed for the poor. In 1882-83 the registered poor numbered 875, and the casual poor 1172, on whom was spent a total of £12,494. There are combination poorhouses at Hawick, Jedburgh, and Kelso. There is no public hospital in the county. The Roxburgh, Berwick, and Selkirk district asylum for the insane is situated at Melrose; a house of refuge at Hawick; a model lodging-house at Jedburgh; and an orphan home at St Boswells. The percentage of illegitimate births was (1871) 11·5, (1873) 11·4, (1876) 11·4, (1880) 11·0 and (1883) 10·2. The registration county gives off part to Selkirk, and receives part of Ashkirk parish from that county; its population is 52,592.

Antiquities.—The antiquities of Roxburghshire are tolerably numerous, and quite as interesting as those of any other of the southern counties. The tumuli, standing-stones, camps, and hill-forts of the ancient Caledonians, the military works and other remains of the Romanised Britons, and the peel-towers and baronial fortalices of the Middle Ages, are too numerous for separate mention, except in our articles on the various parishes. Among the chief British remains are the very large cairn near Tinnis Hill in Liddesdale, the stones at Ninestanerigg, a circle at Plenderleath, standing-stones at Hownam, Yetholm, Kalé Water, etc., and the moat-hill at Hawick. There are remains of forts on the summits of many, if not most, of the highest hills, as on Caerby and Tinnis Hills in Liddesdale; on Blackburn, Cocklaw, the Dunian, Penielheugh, Gattonside Hill, and one of the Eildons. There are caves in the cliffs on the Jed, at Grahamslaw on the Kail, on the Teviot near Roxburgh, and other places. Perhaps the principal relic of the ancient inhabitants is a reach of the CATRAIL, which passes through the county. The Romans have left traces of their presence in Roxburghshire in part of the WATLING STREET, and in the Wheel Causeway, another road which seems to have deflected from the Watling Street to traverse Upper Teviotdale. Traces of this second road are to be found in the NE of Liddesdale, and its junction with the Maiden Road, in the N of England, has been made out. The Saxons have left most direct vestiges of their occupation of the county in the local names. The mediæval peels and fortalices, excluding the minor ones, amounted at one time to about 40, but for the most part have now sunk into ruins or absolutely vanished. Among the most famous of these were the castles of Roxburgh, Jedburgh, Cessford, Hermitage, Home, and Fernieherst; and the towers of Branxholm, Goldielands, Harden, Smailholm, Clintwood, Glassford, Littledean, Lintalee, Habbiedean, and Delphiston. Fastnesses of the time of the Border feuds lined the strong banks of the Oxnam Water and some of the Cheviot valleys, and served both as defences against the English inroads and as rally-points for the Scottish forays. These, as they comprehensively bore the name of Henwood, gave rise to the Scottish Border war-cry of 'A' Henwoody! A' Henwoody!' Splendid remains exist of the abbeys of Jedburgh, Kelso, Dryburgh, and Melrose; and interesting associations remain in connection with the Culdean establishment of Old Melrose, and of the neighbouring successor to it, called Red Abbey. Ancient crosses, more or less in good repair, still stand at Ancrum, Bowden, Maxton, Melrose, and Milnholm, and probably other spots. Among historical crosses, now disappeared, were Lyliot's Cross, probably on the site of the memorial stone on the summit of Lilliard's Edge; Heap Cross at a place called Heap, near Hawick; William's Cross, near Philiphaugh, traditionally said to mark the spot where one of the Douglases was murdered; and Tait's Cross, on the summit of Kershope Hill.

History.—What is now known as Roxburghshire was at the period of the Roman invasion part of the territory of the tribes Gadeni and Ottadini. The Romans marched through the district and made themselves so far masters of it; and after their departure it eventually became part of the Saxon kingdom of Northumbria. Subject to the varying fortunes of that kingdom, Roxburghshire passed under the dominion of the Scottish crown in 1020, when large part of Northumbria was ceded to Malcolm Ceannmor. In 1107, when Alexander ascended the throne, Roxburghshire, with other lands in the south and west of Scotland, passed to Earl David, the king's brother, as an appanage. David ruled it throughout the period of his earldom almost in the manner of a sovereign lord; and on his accession to the throne, treated it as part of his kingdom. He made it a chief scene of his administration; founded and richly endowed the abbeys of Melrose, Kelso, and Jedburgh, and made profuse grants of its lands to his barons; and in consequence almost revolutionised the condition of the county. The Morvilles, Soulises, Corbetts, Percys, Berkeleys, and Vesseys, all followers of David from England, were established in Roxburghshire in this reign. The ambitions of the nobles, and the power and wealth of the rich abbeys, speedily made the county a place of importance, while they assisted in its development.

Numerous events of both national and local importance occurred in the county in reigns subsequent to that of David; but they have been already treated in our articles on the chief towns of the shire.

So early as the commencement of the Scoto-Saxon period, and up to the death of the Maid of Norway, Roxburgh was a sheriffdom. Edward I. seems to have considered this frontier county as his own; and, when he settled the affairs of the kingdom, he appointed a custodier of the castles of Roxburgh and Jedburgh to act as military governor of the whole shire. Under Bruce Roxburghshire began to enjoy for a short period its ancient policy of peaceful times; but after his death it was claimed in sovereignty by the English kings, and suffered no little anarchy from their collisions with the Scottish crown. In 1334 a sheriff was set over it by Edward III., and soon after an antagonist sheriff was appointed by David II.; and, during the revolutions of that age, sheriffs continued to be conflictingly or alternately appointed by the respective monarchs according to the fluctuations of their power. During all the period of David's captivity, Edward III. nominated sheriffs, and governed as he pleased. As the shire, with the exception of Roxburgh Castle, was freed from the English yoke, chiefly by the exertions of the Douglases, it afterwards, as to its sheriffship or administration, generally followed their fortunes. In 1398 the sheriffship of the county and the lands of Cavers were granted to George, Earl of Angus, who died in 1402; and having passed to Isobel, Countess of Mar, they were, without the consent of the king, transferred by her to the Earl of Douglas. Robert III., conceiving that they had become escheated by being disposed of without his consent, conferred them, in 1405, on Sir David Fleming of Biggar. But James Douglas of Balveny, the second son of the Earl Douglas, soon after assassinated the new sheriff, and paved the way, amidst the afflictions of the king and the subsequent misrule of the Duke of Albany, for the Douglases to domineer over the county with the utmost freedom from control. The sheriffship of the county was now, with the lands of Cavers, transferred to Archibald, a bastard son of James, the second Earl of Douglas; and it continued in his family, though probably with some interruptions, till the date of the abolition of hereditary jurisdictions. Archibald Douglas, brother of Douglas of Cavers, claimed in 1747 a compensation of £10,000 for the sheriffship, and was allowed £1666, 13s. 4d.

In early times the major part of Roxburghshire, then included in Northumbria, belonged to the diocese of Lindisfarne. From the reign of David I. till the Reformation, all of it S of the Tweed belonged to the bishopric of Glasgow; and from 1238 this large section formed the archdeaconry of Teviotdale, and was ruled by its own archdeacon under the superintendence of the bishop.

Famous Natives.—Among the natives of this county who have risen to more or less fame, the following may be noted:—William Turnbull (died 1454), Bishop successively of Dunkeld and Glasgow, and founder in 1451 of Glasgow College; Alexander Cairncross of Cumbesley (d. 1701), Archbishop of Glasgow; John Rutherford (d. 1577), scholastic philosopher and author of *The Art of Reasoning on Aristotelian Principles;* Mark Duncan, Principal of Saumur University (d. 1648); Samuel Rutherford (d. 1661); James Thomson (1700-48), the author of *The Seasons*, etc.; Gilbert Elliot (1722-77), poet; and his sister Jane Elliot (1727-1805), who wrote the *Flowers of the Forest;* John Armstrong (1709-79), physician and poet; James Brown (1709-88), linguist and traveller, and author of a Persian grammar and dictionary; Robert Riccaltoun (d. 1765), divine; William Turnbull (1729-96), London physician; John Buchan (d. 1805), physician, author of the *Domestic Medicine;* John Clark (1744-1805), surgeon; John Leyden (1775-1811), poet; Robert Hall (1763-1824), surgeon; Rev. Dr Thomas Somerville (1741-1830), author of a *History of the Reign of Queen Anne;* his niece and daughter-in-law, Mrs Mary Somerville (1780-1872), of mathematical fame; James Bell (1769-1833), weaver and editor of geographical works; Robert Edmonstone (1794-1834), painter; Thomas Pringle (1789-1834), poet; Andrew Scott (1757-1839), poet; Robert Balmer (1787-1844), divine; Robert Davidson (d. 1855), poet; John Younger (d. 1860), prose essayist; James Telfer (1800-62), author; and Thomas Aird (1802-76), poet.

See Alex. Jeffrey's *History of Roxburghshire* (1836; new ed., 4 vols., 1857-64); Robert Bruce Armstrong's *History of Liddesdale* (1884); and other works cited under ABBOTSFORD, CASTLETON, HAWICK, JEDBURGH, KELSO, MELROSE, TWEED, and YETHOLM.

Roy. See GLENROY.

Roy's Cairn. See KNOCKANDO.

Rozelle, a fine mansion, with beautifully wooded grounds, in Ayr parish, Ayrshire, 2 miles S of Ayr town. Its late owner, Alexander Hamilton, Esq. (1815-81), held 1805 acres in the shire, valued at £2691 per annum.—*Ord. Sur.*, sh. 14, 1863.

Ruberslaw, an elongated, rugged, peaked hill on the mutual border of Hobkirk and Cavers parishes, Roxburghshire, 2 miles SSE of Denholm and 5 E by N of Hawick. Rising 1392 feet above sea-level and projecting boldly from the northern frontier masses of the Cheviots, it steeply flanks the left side of the vale of Rule Water, and broadly overhangs the reach of the valley of the Teviot opposite Minto Hills. It looks along a great extent of the Teviot's valley, and forms a conspicuous feature in one-half or more of all the picturesque landscapes of Teviotdale; presents a bleak stern aspect with more traces of volcanic action than probably any other hill in the eastern Border counties; contrasts strongly in peaked summit, ragged sky-line, sharp saliencies of contour, and rockiness or heathiness of surface with the green, smooth, neighbouring Cheviots; attracts electricity and heavy rain-clouds with such force as often to occasion a deep drenching or flooding of the tract adjacent to it while the neighbouring country remains dry; and is noted for having afforded, among the rocky recesses of its skirts, facilities for hill-meetings of the persecuted Covenanters, and for containing there a place where Peden preached to a large congregation. The dwellers in Teviotdale within view of its summit are well accustomed

> 'To see, with strange delight, the snow-clouds form,
> When Ruberslaw conceives the mountain storm—
> Dark Ruberslaw, that lifts his head sublime,
> Rugged and hoary with the wrecks of time;
> On his broad misty front the giant wears
> The horrid furrows of ten thousand years.'

Rubislaw. See ABERDEEN and ABERDEENSHIRE.

Ruchill, Water of, a stream of Comrie parish, SW Perthshire, rising on the skirts of BEN VORLICH, and running first 3 miles east-south-eastward, next 7½ miles north-eastward along GLENARTNEY, till it falls into the river Earn at Dalginross, opposite Comrie town. It receives numerous tributaries, chiefly mountain torrents; flows mostly on a rugged channel beset with boulders and fragments of rock; and is in high repute among anglers for abundance of common trout and sea trout. —*Ord. Sur.*, shs. 39, 47, 1869.

Ruchlaw, an ancient mansion in Whittingham parish, Haddingtonshire, on the left bank of Souchet Water, 3¾ miles SE of East Linton. Its owner, Thomas Buchan Sydserff, Esq. (b. 1822; suc. 1839), holds 2200 acres in the shire, valued at £1701 per annum.—*Ord. Sur.*, sh. 33, 1863.

Rueval, the sound between North Uist and Benbecula islands, Outer Hebrides, Inverness-shire. Measuring 9 miles in length from E to W, and about 3 in mean breadth, it is strewn throughout its eastern part with such a multitude of islands and islets—Grimsa, Flodda, Bent, Broad, Rona, Flotamore, Flotabeg, and others whose names are scarcely known—as to be there a maze of land and water; is reduced to two straits at the W end by the intervention of Baleshare island; has nevertheless free communication at both ends with

the sea; and is commonly, but improperly, called Loch Rueval.

Ruglen. See RUTHERGLEN.

Rule Water, a troutful stream of Teviotdale, Roxburghshire, formed by several burns that descend from the watershed with Liddesdale, and running 9¼ miles northward, partly within Hobkirk parish, and partly on the boundary between Hobkirk and Cavers on the left and Bedrule on the right, till it falls into the Teviot, 2½ miles NNE of Denholm.

> 'Between red ezlar banks that frightful scowl,
> Fringed with grey hazel roars the mining Rowll,'

whose deep rocky ravine is overhung to the right by Bonchester Hill, to the left by Ruberslaw. In tradition or song Rule Water is associated with the old roistering clan of the Turnbulls, and with Sir Walter Scott's 'jovial harper, rattling roaring Willie.'—*Ord. Sur.*, sh. 17, 1864.

Rullion Green, a place in Glencorse parish, Edinburghshire, on the eastern slope of the Pentland Hills, 1⅜ mile NNW of Penicuik. On the evening of 28 Nov. 1666, it was the scene of the defeat of 900 Covenanters, under Col. Wallace, by Sir Thomas Dalyell of BINNS; and a monument is supposed to mark the site of the battle. Dr Hill Burton, however, remarks that 'neither the spot itself, nor any part of the Pentlands close to it, corresponds with the description of the ground taken by Wallace—a ridge running N and S, and rising abruptly on the N end.'—*Ord. Sur.*, sh. 32, 1857.

Rum, an island of the Inner Hebrides in the county of Argyll, and in the parish of Small Isles. It is separated from Skye on the N and NE by Cuillin Sound, across which the coast of Rum is 6⅞ miles N of Rudh 'an Dunain or Dunain Point, at the entrance to Loch Brittle, 6 S by W of the southerly point of Soay, 9 SW of Strathaird Point between Loch Scavaig and Loch Eishart, and 8½ W of the Point of Sleat. The coast is also 4½ miles NW of the nearest part of the island of Eigg, 7 N by W of Muck, and 15 N by W of Ardnamurchan. On the NW it is separated from Canna by the Sound of Canna, 3⅜ miles wide to the island of Canna, and 2 to the adjacent island of Sanday. The lonely Hyskeir or Oigh-sgeir Islands are 11 miles W of the mouth of Glen Harris. In shape Rum is somewhat like a dumpy pear, with the long diameter N and S. The extreme length in this direction is 8½ miles, and the extreme width from E to W is 8 miles. There are some small bays at the mouth of Kilmory Glen on the N, at the mouth of Glen Harris on the SW, and elsewhere; but the only indentation of any size is on the E side at the broadest part, where Loch Scresort opens inland with a length of 1¼ mile, and a breadth of 1⅛ mile at the mouth; and forms a safe and convenient harbour. From this loch to Guirdil on the NW side the coast consists of low rocks or cliffs, with here and there small strips of beach, but round the greater part of the rest of the island there is a series of cliffs rising at many points to heights of over 300 feet above sea-level, and in many places sinking sheer into the sea, though occasionally there are strips of foreshore. The whole surface is very rough and hilly, and of the total area of 30,000 acres little more than one-twentieth is under cultivation. A narrow valley runs westward from Loch Scresort along Kinloch river, and passes across the watershed into the low ground that opens to the sea at Seilisdeir and Guirdil, but the rest of the island may almost be described as a wild sea of hills. The lowest portion is that to the N of the transverse hollows, where a height of 635 feet is reached N of Loch Scresort at Meall a Ghoirtein, and 902 at Sagorishal at the W side of Kilmory Glen. To the S of the central hollows a line of high ground begins at Mam Tuach (988 feet), and extends westward along Monadh Mhiltich at a height of over 800 feet, farther W still of over 1100, and rising between this and the western part of the SW coast of the island into a lofty cliff-edged plateau, the highest points of which are 1869 and 1641 feet above sea-level. To the NW near the most westerly point of the island there is the lower plateau of Sgòr Mor, the highest point of which, to the N, is 1272 feet high. The wildest and roughest part of the island is, however, to the S and SE, where, to the N of Glen Harris, is An Dornabac (858 feet), and higher up Bhaire-mheall (1924). Across the top of the glen is a narrow sharp-pointed ridge running from N to S with the northern shoulder 1770 feet high, and the highest points at Ailbe-meall (2368) and Aisge-mheall (2659)*—the highest point in the island; and SW of this is the wider ridge of which the summits are Ais-mheall (2552), Beinn More (2505), and Sgòr nan Gillean (2503). From the last a cliff-edged plateau runs westward at a height of about 1500 feet, the highest part being 1607. 'The geology of the island of Rum,' says Hugh Miller, 'is simple but curious. Let the reader take, if he can, from twelve to fifteen trap-hills, varying from 1000 to 2300 feet in height; let him pack them closely and squarely together, like rum-bottles in a case-basket; let him surround them with a frame of Old Red Sandstone, measuring rather more than seven miles on the side in the way the basket surrounds the bottles; then let him set them down in the sea a dozen miles off the land, and he shall have produced a second island of Rum, similar in structure to the existing one. In the actual island, however, there is a defect in the inclosing basket of sandstone; the basket, complete on three of its sides, wants the fourth; and the side opposite to the gap which the fourth would have occupied is thicker than the two other sides put together.' The sandstones are not, however, of Old Red age, but are probably Cambrian, and these, with some masses of Lower Silurian rocks, occupy the NW, NE, and SE sides of the island, while the interior and W consist of great masses of eruptive crystalline rocks which have burst through the older strata, the latter being everywhere violently upheaved and contorted, and extensively metamorphosed, as they approach the great central mass. The volcanic rocks form wild and rugged peaks, and are the remains of a great volcanic mountain that at one time occupied the centre and S of the island. Sgòr Mor on the W is famous for its minerals, including pitchstone, heliotropes, and beautiful agates. The hills of Mull being the first land between Mull and Skye to meet the clouds coming in from the Atlantic, the climate is very wet, and there is a large number of streams, the largest being Kinloch river, flowing through Kinloch River Glen, W of Loch Scresort; Kilmory river, flowing through Kilmory Glen in the N; Abhuinn Duibhal and Abhuinn Fiadhinnish on either side of Glen Harris, and Abhuinn Rhangail in Glen Harris, all near the centre of the south-western side; Dibidil river, in Glen Dibidil, to the E of Ben More; and about 40 smaller streams. In the centre of the island is Loch Sgathaig; SSE of it Loch Gainmhich; in the NW, Loch Sgaorishal; on Abhuinn Fiadhinnish, Loch Fiadhinnis; NE of Aisge-mheall, Loch Coire nan Grund—none of them covering more than 19 acres—and there are a number of smaller lochans. In the *Description of the Western Isles of Scotland*, by Donald Monro, Dean of the Isles, who visited the Hebrides in 1549, the name is given as Ronin, and the island is described as abounding with 'litle deire' and wild fowl, but there seem to have been few inhabitants, for he says that 'the fowls hes few to start them except deir.' Prior to 1826 the crofters and their families numbered at least 400, but in that year all, save one family, were cleared off to America, and the whole island was converted into a single sheep-farm, so that at the end of 1828 the sole inhabitants were the sheep farmer and his shepherds. A year or two after some families from Skye were allowed to settle at Loch Scresort. In 1845 Rum was sold to be converted into a deer-forest, and to deer and sheep it is still mostly given up. Pop. (1831) 134, (1861) 73, (1871) 81, (1881) 89, of whom 45 were males and 44 females. Houses (1881), 83 inhabited, 1 uninhabited, and 1 building.

* Perhaps more familiar under the forms of Halival and Haiskeval.

Rumbling-Bridge, a place in Little Dunkeld parish, Perthshire, on the river Bran, 2¾ miles WSW of Dunkeld. The impetuous Bran, whose chasm is spanned here by a one-arched bridge, thunders in a sheer leap of 80 feet into a dark caldron, and is so flanked and barred by rugged rocks, and so mantled with gloom, as to present a solemnly imposing scene.—*Ord. Sur.*, sh. 47, 1869.

Rumbling-Bridge, a station on the Devon Valley railway, in Fossoway parish, at the mutual boundary of Perth and Kinross shires, 4¼ miles ENE of Dollar. It takes its name from a bridge-spanned cataract of the river Devon, which, forming part of what are called the Falls of Devon, commences at the DEVIL'S MILL, 350 yards higher up; traverses thence, till past the Rumbling-Bridge, a narrow gloomy chasm, over blocks and clefts and rugged shelves of rock, between tangled craggy steeps; and emits a hollow rumbling sound, like that produced by heavy-laden waggons on a rough road between reverberating heights. The chasm has a mean depth of not more than 100 feet, but is so shagged with brushwood, so overshadowed by crags, as to look like an abyss; and, as seen from certain points of view, has the appearance of a sharp continuous fissure, formed by a vertical earthquake. Two bridges span it in the vicinity of the hotel—the one 80 feet above the bed of the stream, and constructed in 1713; the other 120 feet high, and constructed in 1816—and both command a grandly impressive view.—*Ord. Sur.*, sh. 40, 1867.

Rumford, a village on the northern verge of Muiravonside parish, Stirlingshire, contiguous to Craigs village in Polmont parish, 7 furlongs SSE of Polmont Junction. Pop. (1871) 352, (1881) 314, of whom 169 were in Craigs.

Rusco Castle. See ANWOTH.

Ruskie, Loch. See MONTEITH, PORT OF.

Rutherford, a decayed village in Maxton parish, Roxburghshire, 7 furlongs SW of Rutherford station on the Kelso branch of the North British railway, this being 6 miles WSW of Kelso. An absurd tradition makes its name originally to have been either Rue-the-ford or Rue-their-ford, from the defeat of an English army, after crossing and re-crossing a neighbouring ford on the Tweed. The ancient parish of Rutherford, long united to Maxton, contained the hospice of St Mary Magdalene, which Robert I. granted to the canons of Jedburgh. The Rutherford estate belongs to Sir Edmund Antrobus, Bart.—*Ord. Sur.*, sh. 25, 1865.

Rutherglen (popularly Ruglen—old form, Rutheglen), a parish containing a town of the same name in the Lower Ward of Lanarkshire, and near the extreme NW of the county. It is bounded N by the river Clyde, Calton parish, and Shettleston parish, E by the parishes of Cambuslang and Old Monkland, S by the parish of Carmunnock, SW by part of the parish of Cathcart, and W by Govan parish and Renfrewshire. On the N the boundary is traced by the Clyde for 4½ miles, and on the W it is formed by the Polmadie and Malls Mire Burns as far as West House; elsewhere it is practically artificial. The greatest length of the parish, from near Rosebank House on the E to the point where the boundary line quits Malls Mire Burn on the W, is 2⅞ miles; the greatest width, from N to S, is barely 2½ miles; and the area is 2219·918 acres, of which 0·647 acres are foreshore, and 67·877 are water. The portion along the Clyde is from 30 to 40 feet above sea-level, and the surface rises at the burgh to from 50 to 100 feet, and thereafter southwards till, near the extreme S, a height of 303 feet is reached. The soil on the low ground is a fertile alluvium, and the whole parish is arable. The surface in the centre is undulating, and on the S there is an ascent towards the Cathkin Hills. Coal and iron are extensively worked. The principal estates are Shawfield, Farme, Rosebank, Gallowflat, Scotstown, Stonelaw, and Bankhead. The parish is traversed by the main road from Glasgow to Hamilton, which passes eastward from the S side of Glasgow, and a branch road connecting this with the Bridgeton suburb of Glasgow crosses the Clyde by Rutherglen Bridge, which was erected in 1776 at a cost of about £1800, of which the burgesses of Rutherglen contributed more than half. Prior to this the only means of communication had been by a ford, or by going round by Glasgow Bridge. There is now at Farme, farther to the E, a wooden bridge called Dalmarnock Bridge, and there is also a railway bridge between the two. The parish is also traversed by two branches of the Caledonian railway system. Farme, which is separately noticed, is an old royal domain, and belonged thereafter to the Stewarts, the Douglases, and the Hamiltons. A tumulus which stood at Drumlaw was destroyed many years ago, and another at Farme also met with the same fate. In the latter, in 1768, a stone coffin was found. Of a third tumulus at Gallowflat, which was surrounded by a moat, some traces still remain. An ancient cross, 10 feet high and 3½ wide, with a sculptured representation of Christ entering Jerusalem riding on an ass, stood on the top of the 'Cross Hill,' about ½ mile WSW of the burgh, till the latter half of last century. The parish, which was in the time of the early Scottish kings a royal demesne, is in the presbytery of Glasgow and synod of Glasgow and Ayr, and is divided ecclesiastically into Rutherglen and Rutherglen West parishes, the latter being a *quoad sacra* charge. The living is worth £463 a year. The churches are noticed under the burgh, and there is also a mission station at Eastfield. Under the landward school board the Eastfield public school, with accommodation for 217 pupils, had in 1884 an attendance of 181, and a grant of £135, 16s. Twelve proprietors hold each an annual value of £500 or upwards, 39 hold each between £500 and £100, 45 hold each between £100 and £50, and 68 hold each between £50 and £20. Landward valuation (1880) £20,400, 11s. 6d., (1885) £25,414, 17s. 9d. Pop. of parish (1801) 2437, (1831) 5503, (1861) 9335, (1871) 10,766, (1881) 13,801, of whom 6666 were males and 7135 females. Houses (1881) 2799 inhabited, 308 uninhabited, and 10 building. Of the total population 2901 were in the *quoad sacra* parish of Rutherglen West, and 1368 were in the landward part of the parish.

Rutherglen, a royal and parliamentary burgh on the N side of the parish just described, and adjoining the Clyde. It has a station on the Caledonian railway, 2 miles SE of Glasgow. The burgh is of considerable antiquity, and tradition carries its origin back to a mythical Caledonian chief (Reuther) who lived and ruled here some two centuries before the Christian era. Though we may decline to believe in this ruler, whether in his own proper person or even in the identification of him with that Reuda, under whose leadership, according to Bede, the Scots crossed from Ireland, and who lived about 350 years after the birth of Christ, yet it is certain that there was a seat of some population here at a pretty early date. As has been already noticed, the parish was a royal demesne, and, in a supplication presented to the Scottish Parliament in 1661, David I. is said to have constituted the demesne village a royal burgh in 1126; while in the oldest extant charter, granted by King Robert the Bruce in 1324, a confirming charter of William the Lyon is quoted, and the date assigned to it is 1189. The latter monarch also granted the church to the Abbey of Paisley, and Bishop Joceline of Glasgow (1175-99) confirmed the grant. The original royalty bounds were so extensive as to include part, if not the whole, of Glasgow; and we find Bishop Walter, of Glasgow (1207-32), engaged in a dispute with both Rutherglen and Dumbarton in regard to payment of toll and custom; and though he prevailed altogether against Dumbarton, he was only able to push the boundaries of Rutherglen a short distance to the E, King Alexander II. having decided that the privileges of the burgh should extend as far as the cross of Shettleston at the E end of modern Glasgow. Then, and long after, it was the chief trading and commercial town in the lower part of the Clyde, and even in 1402, when Lanarkshire was divided into

two wards, Rutherglen was declared the head burgh of the Lower Ward. Much of this early importance was no doubt due to the royal castle which stood at the town and occupied a site in King Street nearly at the point where that thoroughfare is intersected by Castle Street. It must latterly have been a stronghold of some importance, as it was one of the places strongly garrisoned by the English during the wars of independence. During the early part of Bruce's career he is said to have besieged it several times without success; but it was eventually captured by his brother Edward about 1313. Barbour, in his account of the strengths that were then taken, says :—

> 'In this tyme, that thir jupertyss
> Off thir castellis, that I dewiss,
> War eschewyt sa hardely,
> Schir Edward the Bruce the hardy,
> Had all Galloway and Nydysdale
> Wonnyn till his liking all haile;
> And dongyn doun the castellis halle
> Rycht in the dyk, bath tour and wall.
> He hard then say, ang knew it weill,
> That in Ruglyne wes a pele.
> Thiddir he went, with his menye,
> And wonnyn it in schort tyme has he.'

Unlike so many of the other castles then taken, it was not destroyed, and it remained in good order till after the battle of Langside, when the Regent Murray, in laying waste the possessions of the Hamiltons, burnt it. The great tower was subsequently repaired, and became the seat of the Hamiltons of Ellistoun, lairds of Shawfield. Shortly after the beginning of last century, this portion and the new buildings that had been added were abandoned as a residence, and being allowed to become ruinous, the stones were carried off by the inhabitants of the town, and the walls were soon levelled to the ground. The walls of the tower were very thick, and so large were the stones used in the foundation that they remained some 30 years after all the rest of the building had disappeared. Qneen Mary, in her flight from the field of Langside, passed close to the S side of the town, and at a lane, called Din's Dykes, about 150 yards S of Main Street, two rustics, who were cutting grass there at the time, attempted to stop her by threatening her with their scythes. Shortly after the Reformation, Rutherglen seems to have been considered by the presbytery of Glasgow as a place needing special care and attention, and we find that in 1590 they instructed the teacher of the school of Rutherglen to desist from reading prayers, and at the same time denounced the use of sacramental wine mixed with water. In 1593 they had again to interfere with the playing of pipes and the indulging in games on Sunday, both of which were forbidden between sunrise and sunset, on pain of excommunication. Though this proclamation was ordered to be read in all churches, and especially in the church of Rutherglen, it does not seem to have had altogether the desired effect—in spirit at all events—for in 1595 the presbytery had to transmit letters to the bailie of the burgh, enjoining him to stop the profane plays introduced on the Lord's Day, 'as they fear the eternal God, and will be answerable to His kirk;' and they also made complaint as to the practice of fishing for salmon on Sunday, and of the colliers selecting the same time for the settlement of their accounts. During the Covenanting times, Rutherglen was the scene of an event which was the prelude to the armed rising which ended at Bothwell Bridge. In 1697, the irreconcilables of the Presbyterian party had determined to publish a 'Declaration and Testimony of the true Presbyterian Party in Scotland,' and a body of 80 horsemen, under the command of Robert Hamilton, brother of the laird of Preston, set off for Glasgow, with the intention of there publicly proclaiming their doctrine; but finding that that town was occupied by a strong garrison of royalist troops, they turned aside to Rutherglen. The day chosen was the 29th of May, the anniversary of the birthday of Charles II., and also of the day on which he entered London at the Restoration, and the whole town was accordingly

lit up with bonfires in honour of the occasion. These the Covenanters immediately extinguished,* and having lit a bonfire of their own, they therein burnt all the acts of parliament and proclamations directed against themselves and their cause, and then having read their testimony at the burgh cross, to which they also fixed a copy, they retired to Evandale and Newmilns. Claverhouse and his dragoons arrived on the 31st to investigate the matter, but none of the inhabitants seem to have been implicated, and he passed on to Loudon Hill (see Drumclog), where his force was defeated by the armed Covenanters, and thereafter came the battle of the Gallowgate in Glasgow, and of Bothwell Bridge. Rutherglen espoused the cause of electoral reform at a very early date, for in 1671 a new set was fixed whereby the practice of the council's electing their successors was abolished, and the right of election given to the Incorporated Trades and the burgesses generally. Shortly afterwards they anticipated the compulsory clauses of the Education Act of two centuries afterwards, by ordaining, in 1675, that all the inhabitants of the burgh should send their children betwixt 6 and 12 years of age 'to the comune Schoole to be educat yrat with certification that whaever neglects there dewtye herein shall be compelled to pay the quarter waidges as if there children were at the Schoole,' and the fees were to be recoverable by poinding and imprisonment. As Glasgow rose in importance Rutherglen diminished, and in 1695 it was reckoned as one of the least of the royal burghs, the monthly cess being fixed at £1 sterling, while thereafter it became practically a quiet country village; and, though it has again become of more importance, this has arisen rather from its having become a manufacturing suburb of Glasgow than from any power existing within itself. Some old customs survived to a comparatively recent period, one of them, entirely peculiar to the place, being a ceremonious baking, on St Luke's eve, of excessively thin sour cakes, which were given to strangers visiting St Luke's Fair. A peculiar kind of sour cream was also long manufactured for sale, not only in the town itself, but in the surrounding district, but this has now also entirely ceased.

The modern town is somewhat mean in appearance, and consists of a very wide and spacious Main Street—extending along the road from Glasgow to Hamilton—with narrow lanes and streets branching off from it, the chief being Farm Loan Road (N) and Hamilton Road (S), both at the E end; Castle Street (N), near the centre; and Mill Street on the opposite side farther S. At the W end the principal street divides into two narrow branches, of which that to the N retains at first the name of Main Street, and then becomes Chapel Street, while the branch to the S is Cathcart Road. Parallel to Main Street on the N is the long narrow King Street. There are several other straggling streets, and on the low rich flat to the N and NW, beyond the railway, are the principal manufactories. The buildings, even in the main street, are very poor and irregular, many of them being very old houses, with low walls and thatched roofs. The old town-hall is a poor structure, projecting into Main Street on the N side, but the modern town-hall, erected in 1861-62 at a cost of £7000, farther W, and subsequently added to on the E, is a very handsome building which would do honour to many a much larger town. Late Baronial in style, it has a street frontage of 120 feet, and near the centre a square tower with turrets, with ogee roofs, rising to a height of 110 feet. The portion to the W, which was the first erected, contains a burgh court-room, a council chamber, various retiring rooms, and a public hall, measuring 75 by 40 feet, and with accom-

* The fifth article of their own testimony was 'against that presumptuous Act for imposing ane holy anniversary-day as they call it, to be kept yearly upon the 29th of May as a day of rejoicing and thanksgiving for the king's birth and restoration: whereby the appointers have intruded upon the Lord's prerogative and the observers have given the glory to the creature that is due to our Lord Redeemer, and rejoiced over the setting up of an usurping power to the destroying the interest of Christ in the land.'

modation for about 800 persons. The eastern addition contains the various burgh offices. The ancient parish church was immediately to the W of the burgh hall, and was a building of some note, for, according to Blind Harry, it was in it that in 1297 a truce was agreed on between Scotland and England.

> 'Erll of Stamffurd, was chanslar of Ingland,
> With Schyr Amar this trawaill tuk on hand
> A saiff condyt thai purchest off Wallace.
> In Ruglen Kyrk the tryst than haiff thai set.'

and after telling how 'The gret chanslar and Amar thidder past,' and giving an account of the debate between the parties, he tells how

> 'Wallace said; "Schyr, we jangill bot in wayne.
> My consell gyffis, I will na fabill mak,
> As for a yer a finaill pess to tak.
> Nocht for myself, that I bynd to your seill
> I can nocht trow that euir ye will be leill;
> Bot for pur folk grethye has beyne supprisyt,
> I will tak peess, quhill forthir we be awisit."
> Than band thai thus; thar suld be no debait,
> Castell and towne suld stand in that ilk stait,
> Fra that day furth, quhill a yer war at an end:
> Sellyt this pess, and tuk thar leyff to wend.'

and according to the same authority, it was here, too, that Sir John Menteith agreed to betray Wallace to the English:

> 'Schyr Jhon Menteth Wallace his gossop was,
> A messynger Schyr Amar has gert pass
> On to Schyr Jhon, and sone a tryst has set,
> At Ruglyn Kyrk thir twa togydder met.'

Of the church which was dedicated to the Virgin, and had altars of the Holy Trinity and St Nicholas, the only part now remaining is the quaint low tower with its curious spire, the rest having been demolished in 1794 when the present hideous structure about 30 yards farther W was constructed. It is somewhat curious that the dedication of the church was to the Virgin, while the chief fair was held on St Luke's day in October. The modern church has 880 sittings, and is surrounded by a churchyard. The West Church, on the S side of Chapel Street, was built in 1836 as a chapel of ease, and stood unused for some time after the Disruption, but it was constituted a *quoad sacra* charge in 1868. It contains 880 sittings. In 1883 the Established Church also purchased the former Congregational church. The First Free church on the NW, in Glasgow Road, erected soon after the Disruption, is a plain Gothic building with 820 sittings and a square pinnacled tower. The Second Free church, in Farm Loan Road to the E, was erected in 1871-72, at a cost of £3000, as a Reformed Presbyterian church, but passed into possession of the Free Church when the two denominations were united in 1876. It is a good Early English building, with 750 sittings and a SW tower and spire rising to a height of 128 feet. The U.P. church, a very plain building of 1836, in King Street, contains 950 sittings. The Roman Catholic church (St Andrew), on the S side of Main Street, is a plain building of 1853, with 600 sittings. There are also a Wesleyan Methodist congregation meeting in a building in Cathcart Road, a Free Church mission in King Street, and a Congregational church (1881) at Wardlawhill, whilst an Evangelistic hall is at present in course of erection. St John's Masonic Hall is a poor building erected in Cathcart Road, in 1875, at a cost of £1500. Under the burgh school board are the Burgh, Farie Street, and Macdonald's schools, which, with accommodation for respectively 250, 400, and 259 pupils, had, in 1884, attendances of 216, 442, and 280, and grants of £184, 17s., £383, 7s., and £211, 14s. A Free Church school has been closed, but there is also a Roman Catholic school with accommodation for 405 pupils, and an attendance of over 250. The Macdonald school was erected originally by subscription and partly endowed with the interest of £500 bequeathed by Lieutenant-Colonel Macdonald for the education of Protestant children in the town and parish of Rutherglen. Under the Educational Endowments Act it is proposed to spend the interest of this money in bursaries.

Municipal matters are attended to by a provost, 2 bailies, a treasurer, a dean of guild, and 13 councillors. The corporation revenue is about £1900. The police force is united with that of the county. There is a gas company with works on the SW of the town. Rutherglen has a post office, with money order, savings' bank, and telegraph departments, under Glasgow, offices of the Commercial and National banks, agencies of 9 insurance companies, and a newspaper, *The Reformer* (L., 1875), published on Saturday. Among the miscellaneous institutions may be noticed a public library and reading room, a masonic lodge (St John's, 347), a young men's Christian association, and other local societies. There are fairs on the first Friday after 11 March, the first Friday after 4 May, the first Tuesday after 4 June, the first Friday after 25 July, the first Friday after 25 August, the Wednesday before the first Friday of November, the first Friday of November, and the Friday after 25 November. Several of these, particularly the one in May called Beltane Fair, and that in November called St Luke's Fair, are famous for the sale of horses and cattle, and for the large number of buyers and sellers who attend them. The inhabitants of the town and district are employed in the coal pits, quarries, and brick-works in the neighbourhood, or in the industrial works connected with the burgh, these latter being factories, chemical works, dye works, a paper mill, a pottery, tube works, a small boat building yard, rope and twine works, and spindle works. Rutherglen unites with Dumbarton, Kilmarnock, Port Glasgow, and Renfrew in returning a member to serve in Parliament. Parliamentary constituency (1885) 1609; municipal 1633. Valuation of parliamentary burgh (1875) £30,659, (1885) £34,556. Pop. of royal burgh (1831) 4741, (1861) 8071, (1871) 9239, (1881) 11,473, of whom 5502 were males and 5971 females; of parliamentary burgh (1861) 8062, (1871) 9453, (1881) 11,265, of whom 5435 were males and 5830 females. Houses (1881) 2343 inhabited, 243 uninhabited, and 7 building. Of the whole population in the same year, 2784 males and 1369 females were connected with industrial handicrafts, or are dealers in manufactured substances, and of these 1295 men and 37 women were connected with mineral substances alone; while there were 2064 boys and 2068 girls of school age. See also Ure's *History of Rutherglen and East Kilbryde* (Glasg. 1793).—*Ord. Sur.*, shs. 30, 31, 1866-67.

Seal of Rutherglen.

Ruthven, a village in Cairnie parish, Aberdeenshire, 2¼ miles WNW of Rothiemay station and 6 NNW of Huntly, under which it has a post office.

Ruthven, a small parish of W Forfarshire, 3 miles E of Alyth and 4½ N by E of Meigle, under which it has a post office. It is bounded NE, E, and SE by Airlie, SW, W, and NW by Alyth in Perthshire. Its utmost length, from E by N to S by W, is 2⅔ miles; its utmost breadth is 2⅛ miles; and its area is 2087⅝ acres, of which 38½ are water. The river Isla has here a winding course of 3⅞ miles; viz., 1¼ mile west-south-westward along the north-western border, 2¼ miles south-south-eastward through the interior, and 3 furlongs south-westward along the south-eastern border—though the point where it first touches and that where it quits the parish are only 2⅛ miles distant as the crow flies. With rocky bed, and bold, well-wooded banks, it offers many pretty bits of scenery. The surface, a gentle southerly slope, on the northern side of Strathmore, is diversified by some swells and knolls, and attains a maximum altitude of 325 feet, whilst

sinking southward to 165. The rocks are sandstone beds of the Old Red formation, and masses of *débris* from the Grampians. The sandstone is a good building material; and the gravels of the *débris* have been much used for roads. The soil, in general, is a light loam on a gravelly bottom. About two-thirds of the entire area are in tillage; 450 acres are under wood; and 170 are pasture. Much of the wood is oak coppice, both profitable and ornamental; and the rest is chiefly planted larch and Scotch firs on naturally poor land. Ruthven Castle, an ancient baronial residence, belonging at one time to the Earls of Crawford, stood in the SE of the parish near the left bank of the Isla, but, falling into ruin, was long ago removed. A knoll in the neighbourhood still bears the name of Gallows Hill, from being the place where the old feudal barons of Ruthven erected their gibbet; and a small field adjoining it is known by the name of the Hangman's Acres. Ruthven House, near the site of the castle, 3 miles NNE of Meigle, is the seat of Thomas Wedderburn-Ogilvy, Esq. (b. 1814; suc. 1853), who holds 6336 acres in the shire, valued at £5735 per annum. He is sole proprietor, his maternal great-grandfather having purchased the estate (long held by the Crichtons) in 1744. Ruthven is in the presbytery of Meigle and the synod of Angus and Mearns; the living is worth £226. The parish church, on the right bank of the Isla, near Inverqueich, was built in 1859, and contains 150 sittings. Adjacent to it is the manse, rebuilt in 1874. Ruthven in the 12th century was a vicarage of the abbey of Arbroath, dedicated to St Maluack, and specially confirmed by Pope Honorius III. in 1219. The public school, with accommodation for 64 children, had (1884) an average attendance of 50, and a grant of £40, 16s. 9d. Valuation (1857) £1865, (1885) £2195, 2s., *plus* £136 for railway. Pop. (1801) 211, (1841) 471, (1861) 265, (1871) 247, (1881) 195.—*Ord. Sur.*, sh. 56, 1870. See a work by the minister, Dr M'Pherson, F.R.S.E., on *The Ecclesiastical Antiquities of Strathmore* (1885).

Ruthven Barracks. See KINGUSSIE.

Ruthven Castle. See HUNTINGTOWER.

Ruthven, Loch, a pretty birch-fringed lake on the mutual border of Dores and Daviot parishes, Inverness-shire, 11½ miles S by W of Inverness. Lying 700 feet above sea-level, it curves 2¼ miles west-south-westward, varies in breadth between 1 and 4⅓ furlongs, sends off a rivulet ¾ mile west-by-southward to the FARIGAIG, and is perhaps the best trouting loch in the district.—*Ord. Sur.*, sh. 73, 1878.

Ruthven Water. See AUCHTERARDER.

Ruthwell, a village and a coast parish of Dumfries-shire. The village stands 1 mile inland and 1⅝ SSE of Ruthwell station on the Glasgow and South-Western railway, this being 8½ miles ESE of Dumfries and 7 WNW of the post-town, Annan. In 1509 it was erected into a burgh of barony, in favour of Sir John Murray of Cockpool, with the right of holding fairs and markets; but it has long forgotten all its burghal honours, and is a place of neither trade nor manufacture.

The parish, containing also the post-office village of CLARENCEFIELD and the small decayed watering-place of BROW Well, is bounded N by Mouswald and Dalton, E by Cummertrees, S by the Solway Firth, and SW and W by Caerlaverock. Its utmost length, from E to W, is 6½ miles; its utmost breadth, from N to S, is 3⅓ miles; and its area is 11,321¼ acres, of which 2549 are foreshore and 78¾ water. LOCHAR Water winds 5 miles south-eastward along all the Caerlaverock boundary, and then, at low water, must still go 5½ miles further across the broad, clayey sands, having BLACKSHAW Bank to the right and Priestside Bank to the left. The coast-line, 3¾ miles in extent, is low, at no point exceeding 29 feet above sea-level. The interior, too, in the W forming part of LOCHAR Moss, is low and flat, and attains a maximum altitude of only 154 feet near Kirkstyle in the NE. The principal rock is a coarse limestone, which, towards the close of last century, was worked to a considerable extent; and about the same time search was made, but in vain, for a workable seam of coal on Belridding farm. The soil for the most part is a strong gravel, intermixed with vegetable mould; and the tract of moss in the W is partly waste, partly pastoral, and partly used for the supply of peat-fuel. Nearly five-sevenths of the entire area are regularly or occasionally in tillage; and about 535 acres are under wood. COMLONGON and COCKPOOL Castles have been noticed separately. In the manse grounds stands the famous Ruthwell Cross, a sandstone Runic monument 17¾ feet high, 2⅓ feet to 8½ inches broad (3 feet across the arms* of the cross), and 1⅜ to ⅜ foot thick. Of its four faces, the side ones are carved with graceful vines and curious animals of the type familiar in other sculptured stones; whilst on their margins are Runic verses from Cædmon's lay of *The Holy Rood*—unquestionably the oldest extant fragment of English literature. The other two faces, in front and behind, contain representations of the Crucifixion (almost defaced), the Annunciation, Christ healing the Blind, etc., with corresponding Latin inscriptions in Roman character. The discoveries of Kemble (1842), Haigh (1856), and Stephens (1865) have demolished the theory that these faces, in front and behind, are of later workmanship than the cross as a whole, which cross is said to have originally been set up, as early likely as 680 A.D., at Priestside near the sea, and thence to have been drawn by a team of oxen to the parish church, where it remained long after the Reformation. In 1642, however, it was cast down and broken into several pieces, one of which was recovered from a grave towards the close of last century. The other fragments were lying within the church in 1772, but soon after were removed to the churchyard, and left to decay, until in 1802 this priceless relic of antiquity was re-erected in the manse garden† by the Rev. Henry Duncan, D.D. (1774-1846), who was minister from 1799 till the Disruption. He it was who in 1810 established at Ruthwell the earliest savings' bank in Scotland; and he, too, was first to discover reptilian footprints in red sandstone from Corncockle Moor. These were inserted in the wall of his summerhouse, into which there were also built two rudely sculptured stones, without any inscription, said to have been removed to the churchyard from a small chapel or preceptory of the Knights of St John at Kirkstyle, but afterwards by Dr Duncan built into the wall of his Free church in Mouswald parish. The Earl of Mansfield is chief proprietor, four others holding each an annual value of between £100 and £500. Ruthwell is in the presbytery of Annan and the synod of Dumfries; the living is worth £337. The parish church, ½ mile N of Ruthwell village, is a patchwork edifice of various dates, and contains 420 sittings. The Free church, at the Mouswald boundary, 1⅜ mile NW of Ruthwell station, was founded by Dr Duncan; and near it is a pyramidal monument to his memory, 40 feet high. A public and a female industrial school, with respective accommodation for 132 and 56 children, had (1884) an average attendance of 80 and 43, and grants of £78, 5s. and £42, 1s. 6d. Valuation (1860) £5271, (1885) £7108, 0s. 5d. Pop. (1801) 996, (1831) 1216, (1861) 1046, (1871) 972, (1881) 868.—*Ord. Sur.*, shs. 6, 10, 1863-64. See articles by Dr Duncan in *Trans. Royal Soc. of Edinb.* (1828), *Trans. Soc. Ants. Scotl.* (1832), and the *New Statistical Account* (1845); Dr John Stuart's *Sculptured Stones of Scotland* (2 vols., 1856-67); and Joseph Anderson's *Scotland in Early Christian Times* (2d series, 1881).

Ruvail. See RHU VAAL.

Ryan, Loch (the *Rerigonius Sinus* of Ptolemy), a sea-loch striking from the S side of the entrance of the Firth of Clyde, nearly opposite the Mull of Kintyre. It projects partly between Ayrshire and Wigtownshire, but chiefly into the interior of the latter county, forming the eastern boundary of the northern part of the Rhinns of Galloway. It extends 8¼ miles nearly due south-by-eastward; and, measuring from 1⅜ mile to 2⅞ miles in breadth, is narrowest immediately within the entrance, widest within 2¼ miles of the head, being narrower over all the lower half than in the mean of the upper half.

* These are a restoration by Dr Duncan in 1823.

† The weather is telling sadly on the Runic character; and in Jan. 1885 it was proposed to have the monument protected in an apse adjoining the church.

A sandbank called the Scar runs 2⅝ miles diagonally or south-south-eastward from the middle of its W side; and it is indented on the E side, opposite the lower end of the Scar, by Cairn Point projecting from a neighbouring eminence 640 feet high. It is overlooked on the E side of the entrance by rocky shores, and at two parts of its W side by eminences 324 and 314 feet high; has almost everywhere, except at these places and at Cairn Point, low, flat, sandy shores; is left dry, at low water, over most of the Scar, over a belt nearly ½ mile broad around its head, and over a slender belt round most of its upper half; contains excellent anchoring ground over most of its extent, but especially in the south-eastern vicinity of Cairn Point, at Portmore, and in the baylets of Wig, Soleburn, and Dalmennock; forms, on the whole, a safe, commodious, natural harbour, of easy access, and so capacious as to afford ample anchorage for the largest fleets; is adjoined in the western part of its head by the town, seaport, and railway station of Stranraer; and serves, from that place, as the line of the most facile communication by steamers between Scotland and the N of Ireland. Loch Ryan lighthouse, erected on Cairn Point in 1847 at a cost of £4241, shows a fixed light visible at a distance of 12 nautical miles. The Queen has passed four nights on board the royal yacht in Loch Ryan in 1847 and 1849; and she describes it as 'very fine, the hills and glens lovely, the loch very large, and the hills very high and wooded.'—*Ord. Sur.*, shs. 7, 3, 1863-56.

Ryedale, an estate, with a mansion, in Troqueer parish, Kirkcudbrightshire, near the right bank of the Nith, in the southern vicinity of Maxwelltown.

Ryefield. See FERINTOSH.

Rye Water, a rivulet of Dalry parish, Cunninghame district, Ayrshire, running 7 miles south-south-eastward, chiefly through a hilly country, and falling into the Garnock in the north-eastern vicinity of Dalry town.—*Ord. Sur.*, sh. 22, 1865.

S

SADDELL AND SKIPNESS, a parish on the E side of Kintyre peninsula, Argyllshire, formed from the parishes of Killean and Kilcalmonell in 1753. It contains the village of CARRADALE, 13 miles N by E of Campbeltown and 22 S by E of Tarbert, with a post and telegraph office and an hotel; other villages being Saddell, 4 miles S by W, and SKIPNESS, 15⅝ N by E, of Carradale. It is bounded NE by the lower waters of Loch Fyne, E by Kilbrannan Sound, SW by Campbeltown, W by Killean and Kilcalmonell, and NW by Kilcalmonell. Its utmost length, from NNE to SSW, is 24¼ miles; its breadth varies between 1⅜ and 5 miles, whilst tapering northward and southward to a point; and its area is 74½ square miles or 47,663⅘ acres, of which 300⅜ are water, 480⅞ foreshore, and 10⅕ tidal water. The coast, extending 6¼ miles south-south-eastward and southward along Loch Fyne to Skipness Point, and thence 24¼ miles south-south-westward along Kilbrannan Sound, is indented by only one good sized inlet, CARRADALE Bay; projects but one considerable headland, CARRADALE Point (133 feet high); and mostly rises steeply from the sea to a height of over 100 feet. Of seventeen streams that run to Kilbrannan Sound much the largest is CARRADALE Water, others being Skipness, Claonaig, and Saddell Waters; whilst of fifteen small fresh-water lakes the chief are Lochs Romain (4 × 1 furl.; 542 feet) and Tana (2¼ × 1 furl.; 605 feet). The surface is hilly everywhere, in places mountainous, the principal summits from N to S being Cruach Doire Leithe (1236 feet), Coire nan Capull (1095), Fuar Larach (886), Creag Mhor (741), Cnoc an Samhlaidh (866), Deucharan Hill (1081), Cnoc nan Gabhar (753), Beinn Bhreac (1398), Meall Donn (1138), BEN AN TUIRC (1491), Cnocmalavilach (853), and Bord Mor (1338). Of these, Ben an Tuirc, whose height in many works is wrongly given as 2170 feet, commands a magnificent view of seven Scottish and two Irish counties, from Corsill Point in Wigtownshire to Ben More in Mull and Ben Lomond in Stirlingshire. The hills are neither steep, barren, nor rocky, but generally covered with an intermixture of grass and heath; and, rising regularly and with easy ascent from the shore, they have flat summits, or stretch away into small tablelands. The glens, all running from NW to SE, usually open, at their lower ends, upon beautiful little bays; and they enjoy so great a degree of heat, and such happy visitations of fertilising showers, as are highly favourable to agriculture. A stranger traversing the parish lengthwise along the road is presented with a great variety of land and sea views, and alternately moves along a delightful bank overlooking the sea and Buteshire, and suddenly descends into pleasant woods and valleys. Mica slate, intersected with quartzite and basaltic veins, is the predominant rock; and granite occurs in large boulders. The soil in the bottom of the glens is a fine alluvium; that of the higher arable lands is light and sandy. At Saddell village, near the right bank of Saddell Water, stand the tree-embowered ruins of Saddell Abbey. Its cruciform minster measured 136 by 24 feet, or 78 across the transept; and the cloister-garth to the S was 58 feet square; but little remains save portions of the choir wall and the N transept. In the churchyard are some most interesting sculptured effigies; and hard by is a holy well. The abbey of 'Saghadul' or Saddell was founded for Cistercian monks by Ragnall or Reginald, the second son of Somerled, who himself is styled King of the Isles and Argyll, and who died in 1207. It made peace with Haco of Norway in 1263, and in 1507 was, with all its possessions, annexed by James IV. to the bishopric of Argyll. Saddell Castle, 3 furlongs SSE, at the head of Saddell Bay, is a large square battlemented tower. Hither Ragnall's great-grandson, Angus Og, is said to have welcomed Robert Bruce in 1306, after the defeats of Methven and Dalry. Other antiquities, besides those noticed under CARRADALE and SKIPNESS, are several cairns, tumuli, and hill-forts. Opposite Saddell Castle stands Saddell or Glensaddell House, the seat of John Neil Macleod, Esq. of Kintarbert (suc. 1883), who holds 12,805 acres in the shire, valued at £2935 per annum. Other mansions, noticed separately, are CARRADALE House, COUR, SKIPNESS Castle, and TORRISDALE Castle; and four proprietors hold each an annual value of £500 and upwards. In the presbytery of Kintyre and the synod of Argyll, this parish since 1871 has been ecclesiastically divided into Saddell and Skipness, the former a living worth £200. Saddell parish church, at Carradale village, was built about 1771, and contains 354 sittings. There is a Free Church mission station of Carradale and Skipness; and four public schools—Carradale, Saddell, Skipness, and Sperasaig—with respective accommodation for 63, 48, 60, and 30 children, had (1884) an average attendance of 56, 21, 34, and 13, and grants of £62, 1s., £31, 8s., £46, 9s., and £24, 4s. 6d. Valuation (1860) £6621, (1885) £8586, 17s. 9d. Pop. (1801) 1767, (1831) 2152, (1861) 1227, (1871) 1153, (1881) 1163, of whom 789 were Gaelic-speaking, and 686 were in Saddell ecclesiastical parish.—*Ord. Sur.*, shs. 20, 21, 29, 12, 1870-76.

Saddle Yoke. See MOFFAT.

St Abb's Head. See ABB'S HEAD.

St Andrews, a parish containing a royal burgh of the same name on the E coast of the county of Fife, between the entrance to the Firth of Tay and Fife Ness. It surrounds part of the parish of St Leonards,

which is separately noticed. It is bounded N by the parish of Leuchars, NNE by St Andrews Bay, SSE by the parish of Kingsbarns, S by the parishes of St Leonards, Dunino, Cameron, and Ceres, W by the parish of Kemback, and NW by the parish of Leuchars. On the N and NW the boundary is formed by the river Eden from the mouth to Nydie Mill, a distance of 6½ miles; on the SSE it follows Kenly Burn for about 3 miles, though there are divergences; elsewhere, except on the sea-coast and for 2 miles near Wester Balrymonth along a small stream flowing to Kinness Burn, the line is almost entirely artificial. The extreme length of the parish, from Nydie Mill on the W east-south-eastward to the mouth of Kenly Burn, is 9⅝ miles; the average breadth at right angles to this is about 2¼ miles; and the area is 13,312·163 acres, of which 105·344 are water and 1724·813 foreshore. The coast, from the Eden to the burgh of St Andrews, is a flat, firm, sandy beach, skirted by the links; and from the burgh to Kenly Burn an expanse of rough shelving rocks skirted by low cliffs from 30 to 40 feet in height. Among these are several caves, but Kinkell Cave, a mile to the E of the burgh, with a length of about 75 feet and a height of from 10 to 25 feet, is the only one of importance. The Maiden Rock to the N of the burgh, the Rock and Spindle to the E of Kinkell Ness, and Buddo Rock near Boarhills, also present curious features, especially the Rock and Spindle, which shows a peculiar radial arrangement of basaltic columns. The surface is generally flat along the seaboard, and rises from this slowly towards the interior boundary, heights of 360, 375, and 547 feet being reached at East Balrymonth Hill, West Balrymonth Hill, and Clatto Hill respectively. The soil is fertile, and there are over 11,000 acres under tillage, the woodland being mostly confined to the policies of the mansions. The underlying rocks are carboniferous, consisting of beds of sandstone, with thin seams of coal, clay, and clay-ironstone. Many of the beds are fossiliferous, and there are also volcanic rocks. Basalt for road metal and paving-setts is quarried in several places, and sandstone of excellent quality for building is worked at Knock Hill and Strathkinness. The drainage is carried off by the river Eden and Kenly Burn on the borders, and in the centre by Kinness Burn, which enters the sea to the E of St Andrews, one branch rising on the W at Knock Hill, and another on the S border at Priory Bank. At the mouth of the Eden—up which the tide flows for 4 miles—there is a shallow sandy bay abounding in flat fish and shells, and along the lower part of the river salmon and sea-trout may be caught. Magus Muir, on the SW, where Archbishop Sharpe was assassinated, is separately noticed. The north-eastern part of the parish is traversed by the great coast road from Burntisland by the East Neuk of Fife to St Andrews and thence to Dundee, and by the road from St Andrews westward to Cupar-Fife, as well as by a large number of good district roads. The St Andrews branch of the North British railway system enters the parish at the river Eden at Guard Bridge, and runs east-south-eastward 3½ miles to the W end of the town of St Andrews. It was opened in 1852, and the Anstruther and St Andrews section of the North British system was opened to Boarhills in 1883. Besides the town of St Andrews the parish contains also the villages of Strathkinness (W) and Boarhills (E) and the hamlet of Kincaple (N), with part of the hamlet of Denhead (S), the first three of which are separately noticed; as is also the old bridge at Guard Bridge. The mansions are Broomhills, Balmungo, Clatto, Denbrae, Kenly Green, Kincaple, Kingask, and Strathtyrum, all of which are separately noticed; as is also Mount Melville, part of the policies of which are in this parish, though the mansion-house is in the parish of Cameron. The parish is in the presbytery of St Andrews and synod of Fife, and the charge is collegiate; the living of the first minister being worth £800 a year, and that of the second £203. It gives off the *quoad sacra* parish of Strathkinness, and there is a mission station at Boarhills. The churches are noticed in the following article, and there is also a Free church at Strathkinness. Under the landward school board of the parishes of St Andrews and St Leonards, the Boarhills, North Strathkinness, and South Strathkinness schools, with accommodation for 117, 160, and 142 pupils respectively, had in 1883 attendances of 72, 74, and 95, and grants of £56, 11s., £55, 12s., and £77, 1s. The principal landowner is J. H. Balfour of Strathkinness, and 16 others hold each an annual value of £500 or upwards, 47 hold each between £500 and £100, 82 hold each between £100 and £50, and 169 hold each between £50 and £20. Landward valuation (1856) £21,736, (1875) £26,834, (1885) £23,752. Pop. (1801) 4203, (1831) 5621, (1861) 7092, (1871) 7851, (1881) 7835, of whom 3531 were males and 4304 females, while 6458 were in the town and 1120 were in the *quoad sacra* parish of Strathkinness.

The Bay of St Andrews, which may be taken as bounded on the N by the Red Head, and on the S by Fife Ness, measures 24 miles along the line between these points, 10 miles along a line at right angles to this westward to the head of the bay. It is dangerous and stormy; and vessels driven in by easterly winds and embayed between Fife Ness and the Red Head, are compelled to run for the entrance to the Tay, with its dangerous and intricate sand banks.

The Established Church has a Presbytery of St Andrews, which is in the synod of Fife, and comprehends the parishes of St Andrews, Abercrombie, Anstruther-Easter, Anstruther-Wester, Cameron, Carnbee, Crail, Dunino, Elie, Ferry Port on Craig, Forgan, Kemback, Kilconquhar, Kilrenny, Kingsbarns, Largo, Leuchars, Newburn, Pittenweem, and St Leonards, and the *quoad sacra* parishes of Largoward, Newport, and Strathkinness. The Free Church has also a presbytery of St Andrews, with congregations at Anstruther, Carnbee, Crail, Elie, Ferry Port on Craig, Largo, Leuchars, Newport (Forgan), St Andrews, St Monance, and Strathkinness. The Episcopal Church has a united diocese of St Andrews, Dunkeld, and Dunblane, with churches at Alyth, Blairgowrie, Bridge of Allan, Burntisland, Callander, Coupar-Angus, Crieff, Culross, Cupar-Fife, Dollar, Doune, Dunblane, Dunfermline, Dunkeld, Dunning, Forfar, Glamis, Kenmore, Killin, Kinloch-Rannoch, Kinross, Kirkcaldy, Kirriemuir, Leven, Meigle, Muthill, Perth (3), Pitlochrie, Pittenweem, St Andrews, Strathtay, and Weem; and the Roman Catholic Church has an archbishopric of St Andrews and Edinburgh, with churches in Edinburgh (4), Bathgate, Broxburn, Dalkeith, Davidson's Mains, Denny, Dunbar, Dunfermline, Falkirk, Fauldhouse, Galashiels, Haddington, Hawick, Innerleithen, Jedburgh, Kelso, Kilsyth, Kirkcaldy, Leith, Lennoxtown, Linlithgow, Loanhead, North Berwick, Oakley, Peebles, Ratho, Selkirk, Stirling, and West Calder.

St Andrews, a royal burgh, market, and university town, and a seaport on St Andrews Bay, near the middle of the sea-coast of the parish just described. It was long the ecclesiastical metropolis of Scotland, and is still the seat of a presbytery. The station, on a branch line of the North British system leaving the main line at Leuchars, is by rail 12 miles E of Cupar, 15 SE of Dundee, and 45 NE of Edinburgh. The country round is low and flat, and the environs are somewhat tame, though from various points of view, particularly from the W and N, the town itself, with its spires and venerable towers and ruined buildings, looks well. The site of the town is a tabular rocky eminence, some 50 feet above sea-level, and about 1 mile long and ¾ broad, falling to the sea on the E and N by steep rocky declivities, and dipping on the landward side into a narrow vale traversed by the Kinness Burn. The situation is somewhat exposed, but the climate is healthy and bracing.

Lines of Street, etc.—The cathedral, a short distance W of the harbour, marks the point from which the town grew, and so we find that the three principal streets run westward from this point, diverging somewhat from one another in their course. The chief of the three

is South Street, which is the one farthest S; in the centre is Market Street, and farther N is North Street. The first and last are wide airy streets, measuring 70 feet from side to side, and all well built and well paved. Market Street is broad and spacious in the middle and W end, but the E end is still narrow. They are intersected by a number of cross streets from N to S. From the E end of South Street, Pends Lane passes eastward, farther W are Castle Street (N) and Abbey Street (S) —the latter being continued westward by Abbey Walk —Union Street and College Street—both between Market Street and North Street—Church Street, a continuation of College Street to South Street, North Bell Street and South Bell Street—from North Street to South Street—and at the extreme W are Golf Place, Hope Street, City Road, and Bridge Street. Between North Street and the shore there is another thoroughfare called at one time Swallow Street, the line of which is now occupied by the walk called The Scores. Southward from the centre of South Street is Queen Street, and on the NW of the town is a winding path, called Lead Braes Walk. The railway station is at the E end of North Street. The extreme length of the town is about a mile—counting from the harbour westward, and the greatest width at the W end is under half a mile. A rough map of the town, made in 1530, shows that since that time no change has taken place in the plan of the main streets. The most of the older houses seem to have been of wood, and one specimen of a dwelling of this sort remained till comparatively recent years on the N side of North Street, near the E end. Subsequent to the Reformation the wooden houses were replaced by more substantial structures, many of them built with stones taken from the castle, the cathedral, or some of the other ecclesiastical buildings that had been wrecked at the time. The Reformation, however, ruined the prosperity of the town, and the rough and inconvenient state of the streets that had obtained in the end of the 16th century, was but little improved till well into the present century. Prior to 1840, 'there was not a foot of side pavement in any of the streets; filth and squalor abounded unchecked; cows and pigs grazed in front of the colleges; the venerable ruins were fast going, by neglect, to decay, and were littered with rubbish; the lines of the public streets were continually broken by awkward abutments of ungainly houses; there were few visitors of any distinction, even to the splendid links, which lay with all its vast capabilities almost untrodden; and, generally, St Andrews, considering the *prestige* of its antiquity as an ecclesiastical capital, and its rank as a seat of learning, was at the lowest pitch of miserable neglect and decay.' The St Andrews of to-day, with its wide well-paved streets, handsome public buildings and houses, and its gay season of summer visitors, had still to be created; but in 1842 the hour came, and the man, in the person of Major H. L. Playfair (1786-1861), son of Principal Playfair (1799-1819) of the United College. Major, afterwards Sir Hugh Playfair, quitted the service of the Honourable East India Company—in which he held high command in the artillery—in 1834, and retired to St Andrews, where he spent the rest of his life. He was elected provost in 1842, and at once set to work on the new reformation, on which his heart was set. The old streets were widened, levelled, causewayed, and provided with side paths, a new quay built, barriers erected to prevent the encroachments of the sea on the links—one achievement being the completion of the Dane's Work on the NE, an unfinished bulwark of rough stones, commenced by one of the priors in 1507, and afterwards abandoned—the formation of The Scores and other walks, the erection of new university and municipal buildings, and of a club-house at the links. The town had a number of ports or gates, but seems never to have had a regular wall, the fences at the backs of the houses being probably deemed sufficient. One of the gates was at the N end of Castle Street, another at the Harbour Hill, a third at the W end of Market Street, one at the shore on the road to Crail, and one still remains at the W end of South Street.

History.—Like so many of the older Scottish burghs, St Andrews owes its origin and early importance to its connection with the Church. About the 7th century the whole district seems to have been a wild expanse of moorland and forest, forming a hunting-ground for the Pictish kings, and known as Muckross, from the Celtic *Muic*, 'a pig or boar,' and *ross*, 'a promontory.' In the grant of this tract to the Bishop by Alexander I., the name appears as *Cursus Apri*, or boar chase, and the village of Boarhills seems still to keep up the remembrance of the old title, as do also the city arms, the shield bearing a boar tied to a tree. Hector Boece says it was 'so called from a boar of wondrous size, which, after having made prodigious havoc among men and cattle, and having often been unsuccessfully attacked by the huntsmen at the imminent danger of their lives, was at last set upon by the whole of the inhabitants of the district, and killed while endeavouring to make his escape across this tract of ground.' The historian further adds that in his time manifest proofs of the existence of this huge beast were extant in the shape of two tusks, each 16 inches long and 4 thick, which were preserved in the cathedral. Tradition claims for the first religious house at St Andrews, the date of 347 A.D. The full account, as ultimately elaborated, is, that when in 345 Constantine the Great invaded Patras with a large army in order to avenge the martyrdom of St Andrew, an angel appeared to Regulus the bishop and ordered him to remove and hide some of the relics of the saint. In obedience to this command Regulus concealed three fingers of the saint's right hand, a part of one of his arms, the pan of one of his knees, and one of his teeth; and after Constantine had carried off the rest of the remains to Constantinople, the bishop, again visited by the angel in a dream, was enjoined to sail northwards with his relics, and to found and dedicate a church to St Andrew wherever his ship should be wrecked. Meanwhile the saint himself had appeared in a vision to Hungus, son of Fergus, king of the Picts, who was at the time at war with Athelstan, King of the Saxons, with whom he was about to fight an important battle, and after promising him the victory, warned him also as to the approach of the relics and the honour and fame which would gather round the place where they were landed. The Picts vowed to revere St Andrew for ever if they should gain the victory, and as their cause was successful and Athelstan was killed, they were quite prepared to extend a warm welcome to Regulus, who, after sailing about for a year and a half, was at last wrecked in St Andrews Bay somewhere near the present harbour. Regulus, weary with his long voyage, rested for seven days, and then leaving part of his company at the place where he had landed, he set out with the relics for Forteviot, where he was kindly received by Hungus' three sons, 'who, being anxious as to the life of their father, then on an expedition in the region of Argathelia, gave a tenth part of Forteviot to God and St Andrew.' The king returned safe, and farther grants of land were made to the clerics, Hungus himself going with them to Muckeross or Chilrymont, where they had been wrecked, and 'making a circuit round a great part of that place immolated it to God and St Andrew for the erection of churches and oratories, . . . with waters, meadows, fields, pastures, moors, and woods as a gift for ever, and granted the place with such liberty that its inhabitants should be free and for ever relieved from the burden of hosting and building castles and bridges, and all secular exactions.' Such is the completed legend, the older forms of which make, however, no mention of Regulus at all; in a subsequent form he is introduced as a monk and abbot; and in the latest form he is a bishop. Dr Skene, who has compared and analysed all the stories, is of opinion that the early part of the legend belongs entirely to the relics, and was tacked on to the latter part of the story in order to give the dedication to St Andrew a fictitious date, so that the foundation might seem to have a greater antiquity than that of Iona.

The Hungus or Angus, son of Fergus, referred to, seems to be the Angus who ruled over the Picts from 731 to 761, and the adoption of St Andrew as the national saint must lie somewhere between those dates. It must have been subsequent to 731, for when Bede finished his *Ecclesiastical History*, in that year the national saint was St Peter, to whom Nectan had dedicated the land of the Picts in 710, and it must have been prior to 747, for in that year *Tighernac* records the death of Tuathalan, abbot of Kilrymont. Under the date of 736 the same annalist records that Angus devastated Dalriada, so that the latter year is probably that of the foundation of the see and of the mediæval prosperity and importance of the town. The dedication to St Andrew and the great veneration in which he was thereafter held seems to have been borrowed from the Saxons of Northumbria, where Wilfred, Bishop of York, who was the leader of the Roman party in the Northumbrian Church, had erected a church dedicated to this saint, at Hexham, in 674; and there is a vague tradition that Acca, Bishop of Hexham, who was driven from his Northumbrian bishopric in 732, founded a see among the Picts. Whether St Regulus or St Rule is to be connected with the earlier or later portion of the legend is doubtful, and in all probability there is a confusion of two different persons, viz., St Regulus the first Bishop of Senlis in Gaul, and St Riaguil of Muicinsi in Ireland; for while the ordinary day assigned in Scotland for the commemoration of St Rule is the 17th October, the day of the Irish saint is the 16th, and the Aberdeen Breviary has a St Rule commemorated on the 30th March. It is also highly probable that the mystification may be intentional so as to take in an older church dedicated to the Irish St Rule who was a contemporary of St Columba, and erected in the end of the 6th century during the mission to St Cainich—one of the companions of St Columba—who is said to have had a church at Kilrymont, although it is possible that the word in the particular passage where this is mentioned may refer rather to the district generally than to the position of the modern town.

In those early days of St Andrews the primacy was at Abernethy, but it must have been removed to St Andrews during the next century and a half, whether by Kenneth II. or Grig cannot now be settled, for in 908 Bishop Cellach of St Andrews appears as the leading churchman in the great council held by King Constantine at the Mote Hill of Scone. Cellach was the first bishop, and he was succeeded by ten Culdee bishops, the last being the second Fothad or Modath, who performed the ecclesiastical rites at the marriage of Malcolm Ceannmor and Margaret. The next three bishops all died before consecration, and for about 16 years after the death of Malcolm the bishopric appears to have been vacant. The thirteenth bishop was Turgot, Queen Margaret's confessor, who ruled from 1109 to 1115—the first bishop not of native birth—during whose episcopate the Culdee influence began to decline. At some period prior to 1107 the Culdee community had split up into two sections, each of which carried with it a portion of the spiritualities and temporalities which we may reasonably conceive had been originally combined. On the one side were a prior and twelve brethren representing the old foundation, and as clerical vicars performing divine service, and holding part of the estates as well as receiving the minor dues; the other party consisted of the bishop and the representatives of the abbot and other greater officers, secularised, yet enjoying another portion of the estates and the greater ecclesiastical dues. The appropriation of church revenues by secular officials began early in the 12th century to be regarded as a scandal, and a further blow was dealt at the practice in the time of the seventeenth bishop, Robert (1121-59), by the establishment in 1144 of a body of canons regular, to whom was granted the hospital as well as a large amount of other ecclesiastical property, and thus 'there were now two rival ecclesiastical bodies in existence at St Andrews—one, the old corporation of secular priests, who were completely thrown into the shade, and shorn of many of their privileges and possessions; and the other, that of the regular canons, who virtually represented the secularised portion of the old institution, and entered on the enjoyment of their estates. But this rivalry or co-existence was very distasteful to the chief authorities, both lay and ecclesiastical, as soon became manifest.' Immediately upon the foundation of St Andrews, King David, as he did also in the case of Lochleven, made an ordinance that the prior and canons should receive into incorporation with them the Keledei of Kilrimont, who were to become canons provided they would conform to canonical rule. If they refused they were to be merely liferented in their possessions, and as they died out regular canons were to be appointed in their room. The influence of the Culdees was, however, strong, for, notwithstanding this edict, Malcolm IV. confirmed them in their possessions in 1160, and though every pope from 1147 to 1248 issued an injunction that from the time of his edict vacant places should be filled by regular canons, it seems never to have been possible to enforce the order. In 1199 they had a quarrel with the regular prior, and compromised matters by giving up their rights as to dues, while they were allowed to hold the tithes of their own lands. They clung to their prescriptive right to take part in the election of a bishop, down to 1273, when they were excluded under protest, and in 1332 they were absolutely excluded, and seem to have abandoned their claim. They, however, retained possession of their lands in the Cursus Apri, and although the name of Culdee does not appear after the early part of the 14th century, the institution remained under the names of 'Præpositura ecclesiæ beatæ Mariæ civitatis Sancti Andreæ,' the 'ecclesia beatæ Mariæ de Rupe,' and 'the Provostry of Kirkheugh' till the Reformation, when the provostry became vested in the Crown, and in 1616 it was annexed to the see of St Andrews (see Dr Reeves' *Culdees*). What was the size of the bishopric as originally established is not known, but in the time of Malcolm IV. it embraced the counties of Fife, Kinross, and Clackmannan, the three Lothians, Berwickshire, Roxburghshire, and parts of Perthshire, Forfarshire, and Kincardineshire, and though it was afterwards lessened by the erection of new sees, the extent and importance of St Andrews always remained very great, and at the Reformation the archbishop held the patronage of 131 beneficies, and administered the affairs of 245 parishes, the diocese being divided into 2 archdeaconries and 9 rural deaneries. The benefactions of some of the bishops are subsequently noticed. The last bishop was James Kennedy (1440-66)—the thirty-sixth from Cellach—his successor, Patrick Graham (1466-78), having obtained from Pope Sixtus IV. a bull erecting the see into an archbishopric. The document is lost, and the exact date is not known, but it seems to have been issued in 1471 or 1472. The bishop of York had originally the supervision of the portion of the kingdom of Northumbria, along the S side of the Firth of Forth, and, after the introduction of the line of bishops of English birth beginning with Turgot, he repeatedly claimed the bishop of St Andrews as his suffragan, and though the claim was always indignantly set aside by the Scottish authorities, it was revived from time to time down to this period, when St Andrews became the metropolitan see of Scotland, the suffragans being the bishops of Dunkeld, Dunblane, Brechin, Aberdeen, Moray, Ross, Caithness, and Orkney. Poor Graham did not, however, long enjoy his new dignity, for the jealousies and quarrels in which his elevation involved him seem to have driven him mad, and after a formal trial in 1477 he was early in 1478 deposed by a bull of Pope Sixtus IV. and imprisoned first at Inchcolm and afterwards in the priory at Lochleven. Including Graham there were eight Roman Catholic archbishops—the most famous being James Beaton (1522-39) and his nephew Cardinal Beaton (1539-46), and the last John Hamilton who was executed on a charge of treason in 1571. The bishops and archbishops were lords of regality and ultimate heirs of all confiscated

property within their domains; they levied customs; and they seem also to have had, at times at all events, the power of coining money. The archbishops also presided at synods, controlled the appointment of abbots and priors, were included with the king in the oath of allegiance, and took precedence next after the royal family, and before all Scottish noblemen whatever. After the Reformation there were three Tulchan bishops, the last of whom, George Gladstanes, had also from 1610 till his death in 1615 some real ecclesiastical functions. He was succeeded by the well-known John Spotiswoode (1615-39), after whose time there was no archbishop till James Sharpe (1661-79), who was assassinated at Magus Muir, and who was succeeded by Alexander Burnet (1679-84). Burnet was succeeded by Arthur Ross (1684-88), who was the last of the archbishops till the re-establishment of the titular dignity by the Roman Catholic Church in 1878. The modern bishopric in connection with the Episcopal Church was originally constituted in 1720 as a bishopric of Dunkeld, Dunblane, and Fife, but this title was, at the synod held at Aberdeen in 1844, exchanged for that of Bishop of St Andrews, Dunkeld, and Dunblane. This see has been already noticed.

The town, which has been the scene of some of the most memorable events recorded in Scottish history, is of great antiquity, and must indeed have originated soon after the first settlement of the churchmen. The great creator of royal burghs, David I., granted it a charter about 1140, the first provost being a Fleming called Maynard; but the oldest charter existing is a confirmation by Malcolm IV. 'to the burgesses of the bishop of St Andrews of all the liberties and privileges which my burgesses have in common over the whole of my dominions, and at whatever parts they may land.' This grant of free trade led in 1369 and the following years to a long dispute with the burgesses of Cupar-Fife, who had just obtained a charter from David II., and who wished to prevent the citizens of St Andrews from trading within the bounds of Cupar without payment of customs, but the dispute was settled by parliament in favour of St Andrews. In 1408 John Reseby, an Englishman, was burned alive on a charge of heresy, his chief offence seemingly being his upholding the doctrines set forth by Wyclif; and here also perished in 1432 Paul Crawar or Craw, a German physician, accused of propagating the doctrines preached by Huss and Jerome of Prague; and in 1527 Patrick Hamilton, lay Abbot of Fearn, suffered the same fate. He was a young man of great accomplishments and of powerful family, as he was the son of Sir Patrick Hamilton of Kincavel, and Catherine, daughter of the Duke of Albany, and a nephew of the Earl of Arran; but this did not save him from Archbishop James Beaton and his court, who, having 'founde the same Mr Patrike many wayes infamed wyth heresie, disputing, holding and maintaynyng divers heresies of Martin Luther and hys folowers, repugnant to our fayth,' therefore declared 'the sayde Mr Patrick Hameltone, for his affirmyng, confessing, and maintayning of the foresayd heresies, and his pertinacitie (they being condemned already by the Church, general Councels, and most famous Universities), to be an hereticke,' and so handed him over to the secular power to be punished, and he was burned in the open space in front of St Salvator's Church. Within a few years this execution was followed by that of a young Benedictine named Henry Forrest, who, for the heresy of declaring that Patrick Hamilton had been put to death unjustly, was burned 'at the North Church stile of the Abbey Church of St Andrews, to the intent that all the people of Angus might see the fire, and so might be the more feared from falling into the like doctrine.'

In 1538 King James V. came here to receive Mary of Guise, who, says Pitscottie, 'landed in Scotland, at the place called Fyfeness, near Balcomy, where she remained till horse came to her. But the king was in St Andrews, with many of his nobility, waiting upon her home-coming. Then he, seeing that she was landed in such a part, rode forth himself to meet her, with the whole lords, spiritual and temporal, with many barons, lairds, and gentlemen, who were convened for the time at St Andrews in their best array; and received the queen with great honours and plays made to her. And first, she was received at the new Abbey-gate, upon the east side whereof there was made to her a triumphant arch, by Sir David Lindsay of the Mont, lyon-herald, which caused a great cloud come out of the heavens above the gate, and open instantly; and there appeared a fair lady most like an angel, having the keys of Scotland in her hands, and delivered them to the queen, in sign and token that all the hearts of Scotland were open to receive her grace; with certain orations and exhortations made by the said Sir David Lindsay to the queen, instructing her to serve her God, obey her husband, and keep her body clean, according to God's will and commandments. This being done, the queen was received unto her palace, which was called The New Inns, which was well decored against her coming. Also the bishops, abbots, priors, monks, friers, and canons regular, made great solemnity in the kirk, with masses, songs, and playing of the organs. The king received the queen in his palace to dinner, where was great mirth all day till time of supper. On the morn, the queen past through the town, she saw the Black-friers, the Gray-friers, the old college and the new college, and St Leonards; she saw the provost of the town and honest burgesses: But when the queen came to her palace, and met with the king, she confessed unto him, she never saw in France, nor no other country, so many good faces in so little room, as she saw that day in Scotland: For she said it was shewn unto her in France, that Scotland was but a barbarous country, destitute and void of all good commodities that used to be in other countries; but now she confessed she saw the contrary: For she never saw so many fair personages of men, women, young babes and children, as she saw that day;' and so 'the king remained in St Andrews the space of forty days, with great merriness and game, as justing, running at the lists, archery, hunting, hawking, with singing and dancing in maskery, and playing, and all other princely game, according to a king and a queen.'

After the appointment of Cardinal Beaton to the archbishopric the city was in 1545 the scene of the martyrdom of George Wishart, who was burned in front of the Castle for heresy, an execution that led to the speedy death of the Cardinal himself in the following year, when he was murdered by a number of Wishart's friends. Norman Leslie, eldest son of the Earl of Rothes, his uncle John Leslie, Kircaldy of Grange, and others, having, with a small body of followers, obtained admission to the Castle early in the morning, when the drawbridge was lowered to admit some workmen, made themselves quietly and in a very short time masters of the building, and having succeeded afterwards in forcing their way into the Cardinal's chamber, they put him to death with their swords and daggers, one of their number telling him, ere he stabbed him, that the blow he was about to deal was not the mercenary one 'of a hired assassin, but the just vengeance which hath fallen on an obstinate and cruel enemy of Christ and the holy Gospel.' The workmen and servants who had been driven out of the Castle had meanwhile raised the alarm in the town, and 'the provest assembles the communitie, and cumis to the fowseis syd, crying, "What have ye done with my lord cardinall? Whare is my lord cardinall? Have ye slayne my lord cardinall? Lett us see my lord cardinall!" Thei that war within answered gentilye—"Best it war unto yow to returne to your awin houssis; for the man ye call the cardinall has receaved his reward, and in his awin persone will truble the warld no more." But then more enraigedlye thei cry, "We shall never departe till that we see him." And so was he brought to the east blokhouse head and schawen dead ower the wall to the faythless multitude, which wold not believe befoir it saw: How miserably lay David Betoun, cairfull cardinall. And so thei departed, without *Requiem æternam*, and *Requiescat in*

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pace song for his saule.' The body lay for a time, as is noticed under the Castle, at the bottom of a vault in the sea-tower, but was ultimately buried either at Kilrenny or in the churchyard of the Blackfriars monastery. The band of conspirators numbered at first only sixteen, but others soon gathered to them, and so strong was their position, that they held out for fourteen months against the royal forces, but were at last compelled to surrender by a French force which assailed the Castle by land and sea, and battered it with cannon placed on the tops of the town steeples; and so 'at last they concluded that they would give it over to the King of France's will, as they did. Then the Frenchmen entered the castle, and spoiled very rigorously, where they got both gold, silver, clothing, bedding, meat and drink, with all weapons, artillery, and victuals, and all other plenishing, pertaining to the said castle, and left nothing behind them that they might get carried away in their galleys; and took all the captains and keepers of the said castle as prisoners, and had them away to the king of France.' In April 1558 Walter Mill, parish priest of Lunan, a decrepit old man of over 80 years of age, was burnt for heresy in front of the main gate of the Priory, but so strongly was the popular resentment expressed on the occasion, that he was the last of the Reformation martyrs. One of the garrison that had defended the Castle was John Knox, who was carried off to France with the others and condemned to service in the galleys, but who was destined to return in triumph in 1559, when, meeting the Earl of Argyll and Lord James Stewart, by appointment, at St Andrews, he preached there in spite of the threats of the bishop, who had sent word 'to him that if he appeared in the pulpit he would give orders to the soldiers to fire upon him.' His sermons, at this time, on the 14th of June and the three following days, led up to the popular outbreaks that made the Lords of the Congregation masters of the whole kingdom. Queen Mary was at St Andrews in 1563 and in 1564, and it was on the former occasion that Chatelar was here tried and executed for the crime of forcing his way into the queen's apartment while she was resting at Burntisland for a night. In 1583 James VI. having obtained permission from the Earls of Mar, Gowrie, Glencairn, and others, into whose hands he had fallen at the Raid of Ruthven, to visit his uncle the Earl of March, who was living at the Priory of St Andrews, entered the Castle and caused the governor immediately to shut the gates and refuse admission to the adherents of Gowrie, who had accompanied him from Falkland. When he had thus gained his liberty he soon gathered a body of nobles about him and issued a proclamation 'commanding all the lieges to remain quiet, and discharging any noblemen or gentlemen from coming to court accompanied by more than the following number of attendants: viz., fifteen for an earl, fifteen for a bishop, ten for a lord, ten for an abbot or prior, and six for a baron, and these to come peaceably under the highest penalties.' Whether it was from this circumstance or from its being a seat of learning, certain it is that James retained a strong liking for St Andrews, and visited it often while he remained in Scotland; and when, in 1617, he revisited his native country with 'a salmon-like instinct to see the place of his breeding,' he convened an assembly of the clergy at St Andrews, and addressed them in a speech of considerable length, in which he proposed the introduction of Episcopacy, and upbraided them with what he called 'having mutinously assembled themselves and formed a protestation to cross his just desires.' In 1586 and again in 1605 there was a violent outbreak of plague in the city, and in 1609 it was the scene of the trial of Lord Balmerinoch, one of the Secretaries of State, who, being found guilty of having surreptitiously procured the king's signature to a letter addressed to the pope, was sentenced to have his hands and feet cut off, and his lands and titles forfeited, but the first part of the sentence was remitted. In 1650 Charles II. visited St Andrews, and was received at the West Port by the provost and magistrates, who presented him with silver keys; and afterwards Dr Samuel Rutherford made him a long address in front of St Mary's College. During the subsequent troubles the importance of the town rapidly diminished, and its affairs had become so bad by 1655, that in that year the council humbly represented to General Monk, Commander-in-chief in Scotland, that in consequence of the total failure of trade the town was utterly unable to pay the assessment of £43 imposed by him. So far had this process of decay gone in 1697 that a proposal was made to remove the university to Perth, some of the reasons given being that the 'place being now only a village, where most part farmers dwell, the whole streets are filled with dunghills, which are exceedingly noisome and ready to infect the air, especially at this season (September) when the herring guts are exposed in them, or rather in all corners of the town by themselves; and the season of the year apt to breed infection, which partly may be said to have been the occasion of last year's dysentire, and which from its beginning here, raged through most part of the kingdom.'

From this time its deserted condition became still worse, till by 1830 it had become, as has been already described, little more than a country village, with but the spacious streets and fine ruins to serve as marks of its former grandeur, a state from which it was revived by the vigorous exertions of Sir Hugh Lyon Playfair. It was then quite neglected by tourists, and deemed too secluded and bleak to be thought of as a watering-place, but by 1855 there was such a change, that on the 1st January of that year Provost Playfair was able to tell the citizens that 'In consequence of the cleanliness of the streets and the taste displayed in ornamenting the houses, the fame of St Andrews has spread abroad. This well-deserved celebrity is rapidly extending. Strangers from every quarter are induced to reside amongst us.' This progress was greatly aided by the opening of the railway in 1853, and now what Lord Teignmouth desiderated, viz., that it should be visited by strangers in some due proportion to 'its own picturesque situation, the extent, diversity, and grandeur of the remains of its ancient secular, and ecclesiastical establishments, the importance of the events which they attest, and the celebrity which it has derived from the records of historians, and the descriptions of topographical writers'—has more than come to pass, and though the ancient university is not in such a flourishing state as might be wished, the town has become one of the most fashionable summer resorts on the E coast of Scotland, 'the season' lasting from June to October. The great summer amusement is golf, the practice of which has been much encouraged everywhere by the Royal and Ancient Golf Club of St Andrews, established in 1754 by a body of 22 gentlemen, headed by the Earls of Elgin and Wemyss. The club holds two great meetings annually, one in May and the other in October, at which various medals are competed for, among them being the highest honour of the year—the gold medal presented by King William IV. in 1837—the contest for which takes place in October. The captain for the year wears a gold medal gifted by Queen Adelaide in 1838.

Antiquities, etc.—The ruins of the cathedral are close to the shore, at the E end of the town, between the point where the three main streets branch off westward and the harbour. The first building was begun by Bishop Arnold (1159-62) in 1159, but was not finished till the time of Bishop Lamberton (1297-1328) in 1318, the work having been carried on by eleven successive bishops. During its progress in 1276 the eastern end was greatly injured during a violent tempest, and in 1378, only sixty years after completion, the roofs of the choir, east aisle, and transepts, and part of the great central tower, were much damaged or totally destroyed by an accidental fire said to have been caused by a jackdaw carrying a lighted brand to its nest about the roof of the cathedral. The restoration was begun at once by Bishop William Landel (1341-85), and completed in the time of Bishop Henry Wardlaw (1404-40), who in 1430 greatly improved the interior by laying fine pavements

in the choir, transepts, and nave, and also filled in the windows of the nave with stained glass, and formed a large window in the eastern gable. From about 1440 the building remained in all its grandeur till 1559, when it was destroyed by a 'rascal multitude' of Reformers, who had been urged on to their work of destruction by four successive days of the fiery eloquence of John Knox in those famous sermons against idolatry, wherein he 'did intreet [treat of] the ejectioune of the buyers and the sellers furthe of the temple of Jerusalem, as it is written in the evangelists Matthew and John; and so applied the corruptioune that was then to the corruptioune in the papistrie; and Christ's fact to the devote [duty] of thois to quhome God giveth the power and zeill thereto, that as weill the magistrates, the proveist and baillies, as the commonalty, did agree to remove all monuments of idolatrie, quhilk also they did with expeditioune,' with such expedition indeed that in a single day the magnificent building which had cost so many years of labour and so much toil and thought was utterly ruined amid

'—— Steir, strabush and strife
Whan, bickerin' frae the towns o' Fife,
Great bangs of bodies, thick and rife
Gaed to Sanct Androis town,
And, wi' John Calvin i' their heads,
And hammers i' their hands, and spades,
Enrag'd at idols, mass, and beads,
Dang the Cathedral down.'

From this time the ruins were used as a convenient storehouse of building materials, whence every man 'carried away stones who imagined he had need of them,' down till 1826, when the Barons of the Exchequer took possession of what remained, and clearing away the *débris* exposed the bases of the pillars, and did whatever else they could to conserve the ruins. The total length inside has been 350 feet, the width across the nave and choir 62 feet, and the width across the transepts 160 feet. The nave and choir had lateral aisles, and the transept an aisle on the E side, while at the extreme E end was a projecting lady chapel about 33 feet square. 'All that remains of the edifice is the east gable part of the west front, the wall on the south side of the nave, and that of the west side of the south transept. In this last may still be seen the remains of some interlaced arches, and the ruins of the steps by which the canons descended from the dormitory to the church to perform their midnight services. The standing walls contain thirteen windows, of which the six nearest the west have pointed arches with single mullions, and the remaining seven semi-circular arches. This transition from the latter style to the former took place in the 13th century, just at the time when we know the church was about one-half completed. The great central tower was built on four massive piers, the bases of which may still be seen at the intersection of the nave with the transepts, though of the precise form of the tower we have no account. The bases of a few of the pillars also exist; those of the nave being oblong, unequally-sided octagons seven feet by six, while those in the choir are circular and beautifully clustered, five feet and three-fourths in diameter. The east gable consists of three very ancient oblong windows, with semicircular arches and a large window above them. These are situated between two turrets which terminate in octagonal pinnacles. In these turrets are yet seen the terminations of the three rows of galleries, one above the other, which, when entire, ran round the whole clerestory, passing in some places within the thickness of the walls, and in other places opening by arcades into the interior of the church. The west front consists of a pointed arched gateway, ornamented with rich mouldings. Immediately above it were two windows, of which only one is entire; and above these again there appear to have been two arches of somewhat larger dimensions. Only one of the turrets of the west front is standing; it is of delicate and elegant workmanship, and terminates in an octagonal lantern pinnacle. There is no appearance of buttresses in any part of the ruins except at the

north-east angle of the Lady Chapel, where there is the base of a very substantial one. There was, doubtless, another at the corresponding south-east angle.' The wall near the S transept, with a number of stone seats, formed part of the chapter-house. At the opening between the cloister and the chapter-house is a richly-carved gateway. The bells from the various turrets are said to have been sent away by sea to be sold, but the ship on board which they were sank in St Andrews Bay. The architecture is partly Norman, partly Early English. Near the site of the high altar is a large, flat, blue stone, probably marking the burial-place of one or more of the bishops. In the churchyard around are a number of interesting tombstones. On that of the celebrated Dr Samuel Rutherford the following verses are added after the epitaph:—

'What tongue, what pen or skill of men
Can famous Rutherfoord commend,
His learning justly raised his fame,
True godliness adorned his name.
He did converse with things above,
Acquainted with Emanuel's love;
Most orthodox he was and sound,
And many errors did confound,
For Zion's King and Zion's cause,
And Scotland's covenanted laws
Most constantly he did commend,
Untill his time was at an end,
Then he wan to the full fruition
Of that which he had seen in vision.'

On an old tablet on which is a rude carving of two figures with joined hands, and an inscription in memory of 'Christiane Bryd, spous to James Carstairs, Baillie of St Andrews,' is a line with the curious play upon words 'Yet rede my name, for Christ-ane Bryde am I.' Among more recent monuments may be noticed a finely executed female figure looking up to a cross. It was designed and cut by Mr Hutchison, R.S.A., in 1881.

About 120 feet SE of the E end of the cathedral is the unique little Romanesque church of St Regulus or St Rule, with its lofty square tower. It probably occupies the site of the older Culdee cell, and was used by the Roman party as the church before the erection of the cathedral. The greater portion of it has in some mysterious way been preserved from the destruction that has befallen the surrounding buildings. What now remains consists of a square tower 112 feet high and 20 feet 8 inches broad at the base. The choir is 31 feet 8 inches long and 25 feet broad; the height from the floor to the top of the side walls is 29 feet 7 inches, and to the apex of the original high-pointed roof, as shown by the mark on the tower wall, is 55 feet 5 inches. Marks of three successive roofs may be seen on the tower wall. The arches are round-headed and very plain, the tops of the narrow windows being carved out of one slab. The chancel arch, and indeed all the proportions of the building are highly remarkable for the great height in proportion to width. Whether there ever was a nave is doubtful, as no remains of one have ever been discovered, but on the other hand, some of the early seals represent a church—sometimes presumed to be this one—with a central square tower and nave and choir. The masonry is good and substantial, and the stone of such excellent quality that the walls do not look so much weatherworn as those of the cathedral, though they must be much older. The exact date of the structure can be only vaguely assigned to the 10th, 11th, or 12th centuries, most probably the beginning of the latter, if we are to identify it with the church erected by Bishop Robert (1126-58) in 1144. It is just possible, however, that the tower may be older, and be akin to the round towers of Abernethy and Brechin, and like them intended as a place of security. If this be so, it was probably erected by the devotees of the Celtic Church, but Bishop Robert, finding it suited for his purpose, added to it the little church he erected here on the introduction of the canons-regular in 1144, after cutting openings in the E and W walls to provide access to the nave and choir. The St Andrews sculptured stones and the famous sarcophagus were found near this

tower. There was originally no stair or trace of stair in it, but the present one was introduced in 1789 when the rubbish about the building was cleared away and the walls repaired at the expense of the Exchequer. Further repairs were executed in 1841. There is an excellent view from the top of the tower. St Rule's cave is subsequently noticed, and both cave and church were long much resorted to by pilgrims as sung by Scott in *Marmion*—

> 'But I have solemn vows to pay,
> And may not linger by the way,
> To fair St Andrews bound,
> Within the ocean-cave to pray,
> Where good Saint Rule his holy lay,
> From midnight to the dawn of day
> Sung to the billows' sound.'

A very old chapel, possibly the first one erected by the Culdees, and known as the Church of St Mary on the Rock, is said to have stood on the Lady's Craig, a reef near the pier, but no trace of it now remains. Another chapel, also dedicated to the Virgin, stood on the Kirk Heugh, immediately W of the harbour, and was known as the Chapel of the King of Scotland on the Hill, whence, according to some, the early name of the place—Kilrimonth. All traces of it were for a long time lost, but in 1860 the foundations were discovered, and show it to have been, in its later form at anyrate, a cruciform structure 99 feet long, 20 feet wide across the nave, and 84 feet wide across the transepts.

The Priory or Augustinian Monastery, to the S of the cathedral, founded by Bishop Robert (1126-58) in 1144, and one of the finest structures of the class in Europe, has now almost disappeared. The precinct, comprising about 20 acres, was enclosed about 1516 by Prior John Hepburn (1482-1522), by a magnificent wall, which, starting at the NE corner of the cathedral, passed round by the harbour and along behind the houses, till it joined the walls of St Leonard's College on the SW. This, about a mile in extent, is all that now remains, but it must at one time have passed back from the college to the cathedral. The wall is 20 feet high and 4 thick, and has 13 turrets, each of them with canopied niches for an image. The portion towards the shore has a parapet on each side, as if designed for a walk. There were 3 gateways, of the chief of which, now called the Pends, on the SW, considerable ruins still remain. These consist of walls 77 feet long by 16 broad, with a pointed arch at each end, and marks of 3 intermediate groins. One of the other gateways is near the harbour, and the third on the S side. Martine, the secretary of Archbishop Sharpe, who wrote in 1683, though his account was not published till 1797, mentions in his *Reliquiæ Divi Andreæ* that in his time 14 buildings were discernible besides the cathedral and St Rule's Chapel. Among these the chief were the Prior's House or the Old Inn, to the SE of the cathedral, of which only a few vaults now remain; the cloisters, W of this house, now the garden of a private house, in the quadrangle of which the Senzie Fair used to be held, beginning in the second week of Easter, and continuing for 15 days; the Senzie House or house of the sub-prior, subsequently used as an inn, but now pulled down and the site occupied by a private house; the refectory, on the S side of the cloister, which has now disappeared; the dormitory, between the prior's house and the cloister, from which, as Fordun relates, Edward I. carried off all the lead to supply his battering machines at the siege of Stirling, now also gone; the Guest Hall, within the precinct of St Leonard's College, SW of Pends Lane; the Tiends' Barn, Abbey Mill, and Granary, all to the SW; and the New Inn, the latest of all the buildings of the monastery, erected for the reception of Magdalene, the first wife of James V. The young queen, who was of delicate constitution, was advised by her physicians to reside here, and the New Inn was built for her accommodation in, it is said, a single month. The queen, however, did not live to occupy the house, as she died on the 7th of July 1537, six weeks after her arrival in Scotland. It was, however, for a short time the residence of Mary of Guise, when she first arrived in Scotland, and after the priory was annexed to the archbishopric in 1635, the building became the residence of the later archbishops. The prior had superiority over the priories of Pittenweem, Lochleven, Monymusk, and the Isle of May, and was also a lord of regality. As a baron, he took precedence in parliament of all priors, and he, his sub-prior, and his canons formed the chapter of the cathedral. From 1144 to 1535 there were 25 priors; from 1535 to 1586 the lands were in possession of the Earl of Murray and Robert Stewart, the latter entirely and the former most of the time being merely lay commendators; from 1586 to 1606 they were held by the Crown; from 1606 to 1635 by the Duke of Lennox; from 1635 to 1639 by the Archbishop of St Andrews; from 1639 till 1661 by the University; from 1661 till 1688 by the archbishops again; and from 1688 by the Crown. The part within the abbey wall was sold by the Commissioners of Woods and Forests to the United College for £2600, the intention being to convert them into a botanical garden, but the design has never been carried out.

A Dominican Monastery, which stood on the S side of South Street, near the West Port, was founded in 1274, by Bishop Wishart (1273-79), and was governed by a prior, who was not subject to the Episcopal control. The site and the adjacent ground passed at the Reformation to Lord Seton, and was subsequently made over to the town council as a site for a grammar school, and passed thereafter into the hands of Dr Bell's trustees. The ruin of the N transept of the chapel still stands on the street line, in front of Madras College. An Observantine or Greyfriars' Monastery, which stood immediately N of the West Port, at the W end of Market Street, was founded about 1450 by Bishop Kennedy (1440-66), and was completed in 1478 by Archbishop Graham (1466-78). It was governed by a warden, but the buildings, partially destroyed at the Reformation, have entirely disappeared. The grounds belonging to it were granted to the town council by Queen Mary.

The ruins of the Castle stand on a rocky promontory overhanging the sea, NNW of the cathedral. The original building is said, on the authority of Martine, to have been erected by Bishop Roger (1188-1202) as an Episcopal residence, the bishops having previously lived in the Culdee monastery at Kirkheugh, or in the Priory. From the first it seems to have been a place of military importance, and when in 1332 the discontented Scottish barons, with Edward Baliol at their head, landed in Fife, the Castle fell into their hands, and was held by them till 1336, when it was recovered for David II. by Sir Andrew Moray of Bothwell, who dismantled it. About 1390 a new building was erected by Bishop Trail (1385-1401), and in 1402 the Duke of Rothesay set out to make an attempt to seize it, but was stopped by Albany at Strathtyrum and carried off to die at Falkland. It is sometimes stated that he was confined here for a short time, but there seems to be no foundation for the assertion. James III. seems to have been born here, for in the 'Golden Charter' James II. speaks of the 'birth of his first-born son in the chief mansion of the city of the blessed Andrew.' In 1514, during a dispute about the succession to the archbishopric vacant by the death of Archbishop Stewart (1509-13), the Douglases seized, and for a short time held, the Castle on behalf of Bishop Gavin Douglas, who was one of the candidates, but they were driven out by Prior John Hepburn as vicar-general for the time. In 1526 Archbishop James Beaton (1522-39) sided with the Lennox faction against the Douglases, and so after the battle of Manuel, in which the latter party were victorious, they visited Fife and plundered the Castle, 'but he was,' says Pitscottie, 'keeping sheep in Balgrumo with shepherd's clothes on him like as he had been a shepherd himself.' As, however, he was 'a great man and had many casualties of tacks and tithes to be gotten at his hand,' the Douglases

soon came to terms with him, and he returned to his see. He became involved in other plots later, and was for a short time, in 1533, imprisoned in his own castle, as was also his nephew and successor, Cardinal David Beaton (1539-46), in 1543 by Arran when regent; though it is doubtful how far this latter imprisonment was real. In 1546 the Cardinal was murdered here, as has been already noticed, by a party of the Reformers, who held the Castle till the following year, when it was captured by a body of French troops, an expedition sent by Henry VIII. to their assistance having arrived too late. Many of the defenders, John Knox among others, were carried off to France and sent to the galleys. There is a very picturesque account of the siege in Pitscottie's *History*. The Castle, which had been much injured, was repaired by Archbishop Hamilton (1549-71), and in 1583 afforded refuge to James VI. till he freed himself from the power of the lords who had seized on his person in the Raid of Ruthven. In 1606 the Castle was gifted to the Earl of Dunbar, but was restored to the archbishop (Gladstanes, 1610-15) about 1612, for in the following year, during a meeting of the bishops at St Andrews, they were entertained by Gladstanes in the Castle. After the battle of Philiphaugh a number of the prisoners were confined here, among others being Gordon of Haddo, Ogilvie of Inverquharity, and Sir Robert Spotiswood, the first and last of whom, as well as some others of smaller note, were executed. After this time the building passed into the possession of the town council, who proved but sorry guardians, for in 1654 they ordered its 'sleatts and timmer' to be used for the repair of the pier. The small portion that remains is now cared for by the Commissioners of Woods and Forests. The encroachments of the sea in its neighbourhood have been considerable, for Martine says that in his time there were people still living who remembered seeing bowls played on flat ground to the E and N of the Castle where now there is none, and in 1801 a considerable portion of the seaward walls of the building itself were undermined and fell. In the centre of the grass-grown court-yard is a rock-cut well about 50 feet deep, but the chief point of interest is the old bottle-shaped dungeon at the NW corner beneath the sea-tower. It is cut out of the solid rock, and is 7 feet in diameter at the top and 16 at the bottom, the depth being 18 feet. Many of the early Reformers with whose names St Andrews is associated are said—whether truly or not, none can tell—to have been confined in its dismal depths. It was also the original burial-place of Cardinal David Beaton after his murder in 1546. 'Now because the weather was hot,' says Knox, 'and his funerals could not suddenly be prepared, it was thought best . . . to give him great salt enough, a cope of lead, and a nuke in the bottom of the Sea-Tower, a place where many of God's children had been imprisoned before, to await what exsequies his brethren the bishops would prepare for him.' The open ground in front of the Castle was the scene of George Wishart's martyrdom in 1546.

Public Buildings, etc.—The town-house and tolbooth were long in the centre of Market Street, but they have, since 1858-62, been superseded by the New Town Hall on the S side of South Street, at the corner of Queen Street. It is Scottish in style, and contains a council room, a police station, and public hall, with retiring rooms. The great hall is 75 feet long, 35 wide, and 24 high, and has accommodation for 600 persons. The Town Church, or properly the Church of the Holy Trinity, on the N side of South Street, near the centre, was originally built in 1112 by Bishop Turgot, and subsequently by Bishop Bernham dedicated to the Holy Trinity. It had, in the palmy days of the Roman Catholic Church, thirty altarages, each with a separate priest and fifteen choristers; and it was here that John Knox preached the sermon that led to the destruction of the Cathedral and the monastic buildings, as is afterwards noticed. The original building was a beautiful structure, partly Norman in style and partly First Pointed, but in the end of last century it underwent vigorous restoration of the only kind then known. The groined roofs were removed from the side aisles, and the outer walls raised nearly to the height of the original clerestory walls, the space so gained being utilised in the provision of galleries by which the church, which is 162 feet long and 63 wide, was made capable of accommodating 2500 people, and, architecturally, ruined for ever. In it is preserved a fine specimen of the old Scottish branks, usually called the Bishop's Branks, and said to have been fixed on the heads of Patrick Hamilton and others of the earlier Scottish martyrs when they were put to death. This tradition seems, however, to be untrue, and its present name may be traced to the fact that Archbishop Sharpe made use of it for silencing a woman who had promulgated scandal about him openly before the congregation. From the top of the steeple there is a good view. The pulpit was not occupied by an Episcopalian clergyman from the time of the Revolution in 1688 till 16 March 1884, when the Bishop of St Andrews (Dr Wordsworth) preached on behalf of the University Missionary Society. In the interior, to the right of the main entrance, is a monument of black and white marble, erected in memory of Archbishop Sharpe, by his son, Sir William Sharpe of Scotscraig and Strathtyrum. Executed in Holland, it shows an angel about to place the crown of martyrdom on the archbishop's head; above is a bas-relief representing him as propping up a falling church, while below another represents the murder. On an urn is a long Latin inscription of a most extravagant description, which describes the archbishop as 'a most pious prelate, a most prudent senator, and a most holy martyr,' and declares that Scotland 'saw, acknowledged, and admired' him 'as a chief minister of both her civil and ecclesiastical affairs;' Britain 'as the adviser of the restoration of Charles II. and of monarchy;' and the Christian world 'as the restorer of Episcopacy and good order in Scotland.' 'Whom all good and faithful subjects perceived to be a pattern of piety, an angel of peace, an oracle of wisdom, an example of dignity; and all the enemies of God, of the King, and of the Church found the implacable foe of impiety, of treason, and of schism.' Sir William also gave a sum of money to be applied to the relief of the poor on condition that this monument was kept in good repair in all time coming, and in 1849-50 the parochial board expended about £130 in restoring it to good condition. At this time the vault was opened, but no remains of the archbishop could be found. His skull and bones were probably removed, either when the church was altered in 1798, or in 1725 when the town council offered a reward of £10 sterling for the discovery of the person or persons who had entered the church and injured the monument. Some of the communion plate was presented to the church by Archbishop Sharpe. St Mary's Church, near the W end of Market Street, built in 1840, and greatly improved in 1870, contains 560 sittings. It has a fine oak pulpit and several stained-glass windows, two of them having been introduced in memory of the Rev. Dr Robert Haldane, by whose exertions the church was erected, and who was its first minister. A previous church of St Mary, of ancient date, and sometimes called the Kirkheugh Church, has been already noticed. St Leonard's or College Church, afterwards noticed, contains 396 sittings. A tall square tower somewhat resembling that at the cross of Glasgow rises at the W end of the church, and is surmounted by a stumpy octagonal spire. The Free church (Martyrs), on the opposite side of North Street, built in 1844, has a good front; it contains 864 sittings. The original U.P. church, built in North Street in 1826, had 380 sittings, but the present building with a spire in Market Street, built in 1865, has accommodation for 700. The Congregational church was originally a small building in Market Street, with 320 sittings, but the present place of worship, with 360 sittings, was erected in South Bell Street in 1856-58. The Baptist church in South Street, built in 1842, has 250 sittings. The original Episcopal church (St Andrew), in North Street, to the E of the College Church,

was erected in 1825 at a cost of £1400, and enlarged in 1853 so as to have 180 sittings, but it was superseded by the present building, erected in 1867-69, consecrated in 1878, and containing 530 sittings and a fine organ. Dr Rowand Anderson was the architect, and the style is that of the 13th century. Funds are now being raised for the completion of the tower and spire, whose height is to be 160 feet. The Gibson Memorial Hospital, founded and endowed by the late Mr William Gibson of Duloch, for the sick, aged, and infirm poor of the city and parish of St Andrews and of the parish of St Leonards, was erected in 1882-84 at a cost of £4000. The Recreation Hall with tennis courts, constructed at a cost of £2000 in 1883-84, contains the largest public hall in Fife, the room measuring 100 by 50 feet, and being about 30 feet high. In Market Street is a handsome fountain, erected in 1880 in memory of Major Whyte Melville, the well-known novelist, and one of the four memorials of him instituted by his friends after his death, the others being a tombstone at Tetbury where he died, a monument in the Guards' Chapel, Wellington Barracks, London, and a sum forming the nucleus of an annuity fund in connection with the Hunt Servants' Benevolent Society. The fountain here, which cost about £800, is of red sandstone from Dumfriesshire, with steps, columns, and copings of Dalbeattie granite. The diameter is 14 feet, and the total height about the same. It rises in a series of three basins, and on the second, which is very elaborately carved, are four white marble medallions, one showing a bas-relief bust of Major Whyte Melville, executed by J. C. Boehm; other two respectively, the family arms and the arms of the Coldstream Guards; and the fourth the following inscription:—

'This fountain is erected by many friends, rich and poor, to the beloved memory of George John Whyte Melville of Mount Melville, Bennochy, and Strathkinness; born 19th July 1821; died 5th December 1878, from an accident in the hunting-field near Tetbury, Gloucestershire. His writings delighted; his conversation charmed and instructed; his life was an example to all who enjoyed his friendship, and who now mourn his untimely end.'

Immediately to the W of the Castle is the ladies' bathing place, and about 150 yards farther W is the cave, or rather rock chamber, formerly known as St Rule's Cave, but now as Lady Buchan's, from having been fitted up by that eccentric person (the mother of Lord Chancellor Erskine), at the close of last century, for tea parties. It is much worn away. A hundred yards NW of the Castle are the public baths, and farther W still are the Witch Lake and the Witch Hill, where, if the witch escaped death by the water ordeal at the former, she suffered worse doom at the stake on the latter. St Andrews was long troubled with witches, and we find it stated that even such a grave man as the Earl of Murray repaired to St Andrews in 1569, 'quhair a notabill sorceres callit Nicniven was condemmit to the death and burnt.' Some have been inclined to believe that she is the same witch mentioned* in Law's *Memorials* as having been burnt in 1572, and that the regent of the time would therefore be Morton. The author of the *Historie of King James the Sext*, who tells the story, also adds that 'a Frenchman callit Paris, quha was ane of the designeris of the King's [Darnley's] death, was hangit in St Andro, and with him William Steward, lyoun king of armes, for divers pointes of witchcraft and necromancie;' and again in 1588 Alison Pearson, in Byrehills, was convicted and burnt on her own confession. She seems to have been a 'wise woman,' and to have by means of her prescriptions cured Archbishop Adamson of an illness, which she was alleged to have transferred to a white pony, which died in consequence. Here, as elsewhere, a horrible form of death seemed to have no effect, for reputed witches continued to be found in Fife till the end of the 17th

* She seems to have been a very bad specimen, for she is declared to have said openly that she cared not whether she went to heaven or hell; but on a white cloth 'like a collore craig with stringis whairon was mony knottis,' being taken from her person, she gave way to despair, and exclaimed, 'Now I have no hoip of myself.'

or the beginning of the 18th century, when the last one—a woman named Young, who lived in North Street—was burnt at the Witch Hill. Their fame, too, seems to have sometimes spread abroad, for in 1643 we find Spalding breaking off an account of the 'annoyans' of the king's subjects over the Solemn League and Covenant to record that 'about this tyme many witches are takin in Anstruther, Dysert, Culross, Sanctandroiss, and sindrie uther pairtis in the cost syde of Fyf. Thay maid strange confessionis, and war brynt to the death.' The bay, between the Witch Hill and the point called The Step, is now the gentlemen's bathing-place. To the W of this is the Bow Butts, a sort of natural amphitheatre, where the citizens used anciently to practice archery, and where, from 1681 to 1751, the members of an archers' club competed annually for the right of affixing a medal with the name of the best shot to a silver arrow. The practice of archery was revived in 1833, but did not prosper; but now the pastime is carried on by many of the lady visitors. Immediately S of the Bow Butts is the Martyrs' Monument, erected in 1842-43 to commemorate the martyrs of the Scottish Reformation who suffered at St Andrews. It is an obelisk on a graduated base, and rises to a height of 45 feet. Farther W is the Golf Club House, a plain square building of 1854, containing a principal room, a billiard room, a reading-room, dressing-rooms, and stewards' apartments; and from the club-house the famous links extend north-north-westward to the mouth of the river Eden, a stretch of 1½ mile. They are simply sandy plains covered with coarse herbage and interspersed with bunkers and bent hills, but their now classic connection with the game of golf has been the making of modern St Andrews. They belong to the estate of Strathtyrum, but the community have the privilege in perpetuity of playing golf over them within certain marks, and they are kept in order by the Royal and Ancient Golf Club. There are nine holes out and nine in, the whole round being almost 3⅝ miles. The average number of strokes for very good players is from 87 to 97.

Educational Institutions. — The University of St Andrews is the oldest in Scotland, St Mary's College having been founded by Bishop Wardlaw (1403-40) in 1411, and in 1413 a series of 6 Bulls were obtained from Pope Benedict XIII. sanctioning the foundation and constituting a *Studium Generale* or University, where instruction was to be given in theology, canon and civil law, medicine, and the liberal arts, and power was also granted to confer degrees. The classes, which were under the care of 21 doctors or lecturers, were at first scattered throughout the city, each teacher being in a separate room, but the bishop soon provided accommodation for them in a building called the Pedagogy, in South Street. Under the royal patronage of James I., who confirmed all the charters in 1432, the young seat of learning prospered; and in the time of James II., in 1455, Bishop Kennedy (1440-66) founded and endowed a second college, which he dedicated to Christ, under the name of St Salvator. The foundation was confirmed by Pope Nicholas V., and subsequently fresh privileges were granted to the college by Pope Pius II. in 1458, and Pope Paul II. in 1468, the latter granting power to confer degrees in theology and arts. In 1512, Prior John Hepburn (1482-1522), in conjunction with Archbishop Alexander Stewart (1506-13), founded St Leonard's College, and endowed it with the revenue of an hospital, originally founded for the maintenance of poor pilgrims who had come to visit the shrine of St Andrew; and in 1537, Archbishop James Beaton (1523-39), with the approval of Pope Paul III., added to the endowments of the original Pedagogy, and erecting new buildings, dedicated the college to the Virgin Mary; while, in 1553, Archbishop John Hamilton (1546-71) granted additional endowments and obtained a fresh Bull of confirmation from Pope Julius III. In 1580 Andrew Melvil was transferred from Glasgow to St Andrews as principal, and the whole arrangements of the colleges were remodelled, St Mary's

being entirely set apart for the teaching of theology. The troubles of this and the following century greatly injured the university, and in 1697 a proposal was made that its seat should be transferred to Perth, some of the reasons given being that, at St Andrews, 'the climate is very severe; that the town is out of the way; that provisions are dear; that the streets are foul and full of noisome pestilence; that endemics and epidemics are common; and finally that the town's-folk do not look favourably upon learning, and frequently mob the students.' The scheme was abandoned, but a suspicion, in 1718, that both students and professors were tainted with Jacobitism and leanings towards Episcopacy led to a visitation by royal commission, and made matters still worse. By 1747 the revenues of the colleges of St Leonard and St Salvator were so much diminished that in that year an act of parliament was obtained, providing for the union of the two institutions, and the restriction of their teaching to arts and medicine, while in St Mary's, theology alone was to be taught. This arrangement still holds good, and the University consists of the two corporations of the United College of St Salvator and St Leonard, with a principal and 9 professors, distributed into a Faculty of Arts and a Faculty of Medicine; and St Mary's College with a principal and 3 professors, forming a Faculty of Theology. In the Faculty of Arts the chairs, with the dates of foundation and patrons, are:—Greek (instituted at foundation of colleges; University Court); Humanity (1620; Scot of Scotstarvit, Duke of Portland); Logic and Metaphysics (instituted at the foundation of the colleges; University Court); Moral Philosophy (instituted at the foundation of the colleges; University Court); Natural Philosophy (instituted at the foundation of the colleges; University Court); Mathematics (1668; Crown). In the Faculties of Arts and Medicine both, is the Chair of Civil and Natural History, originally founded in 1747 as a chair of civil history only, but by an ordinance of the University Commission of 1858, the professorship is now practically devoted to Natural History, and falls under the Faculty of Medicine. The patron is the Marquess of Ailsa. In the Faculty of Medicine are the Chairs of Medicine and Anatomy (1721; University Court); Chemistry (1808, but no professor appointed till 1840, as the endowment did not become available till then; the Earl of Leven). There is also a principal appointed by the Crown, and apart from either faculty is the Chair of Education, founded by the Bell Trustees in 1876. In St Mary's, in the Faculty of Theology, are the Chairs of Systematic Theology (instituted at the foundation of the college, and held always by the principal; the Crown); Divinity and Biblical Criticism (instituted at the foundation of the college; the Crown); Divinity and Ecclesiastical History (suppressed for some time for want of funds, but revived and endowed in 1707; the Crown); Hebrew and Oriental Languages (suppressed for some time for want of funds, but revived in 1668, and received additional endowment from William III. in 1693; the Crown). There is a parliamentary grant in aid of the professorial salaries of about £2200, but, beyond this and the class fees, the incomes are mostly dependant on land, and as the value of the college lands has been seriously affected by the present agricultural depression, the United College has for several years been labouring under monetary difficulties which have seriously affected the amount paid to the occupants of the several chairs. Connected with the University there are bursaries and fellowships worth nearly £4000 per annum, of which about £1300 are or may be shared with other Scottish universities. Of what belongs to St Andrews alone, £450 belongs to 8 scholarships, all connected with the Faculty of Arts, and the rest is divided among 93 bursaries attached to the United College, varying in value from £5 to £50 per annum; 22 bursaries shared partly with St Mary's College, varying in value from £14 to £30; and 19 bursaries belonging to St Mary's alone, varying in value from £6 to £30. There are also a number of important prizes in books or money open to students in the different classes. The University corporation consists of the chancellor, rector, two principals, the professors, the graduates, and the matriculated students, the government being vested in the University Court and the Senatus Academicus. The officials of the University are the chancellor (appointed for life by the General Council), the rector (appointed for three years by the matriculated students), the two principals, and the professors in the three faculties. The senior principal for the time being is principal of the University. The University Court consists of the rector, the senior principal, an assessor nominated by the chancellor, an assessor nominated by the rector, an assessor elected by the General Council, and an assessor elected by the Senatus Academicus. It acts as a court of appeal and supervision for the senatus, and appoints to some of the chairs. The General Council consists of the chancellor, the members of the University Court, the professors, and all graduates who have been registered; and since 1881 this registration has been compulsory. The Senatus Academicus consists of the principals and professors who manage the affairs of the University and confer degrees. The session of the United College begins in the first week of November and closes in the end of April, and that of St Mary's College begins about 10 days later, and closes in the end of March. The students of the United College wear red frieze gowns with crimson velvet collars, those of St Mary's have no distinctive dress. The number of matriculated students averages about 160, of whom from 130 to 140 are in the Faculty of Arts and the rest in that of Divinity. In session 1883-84, in arts 19 took the degree of M.A., and 1 that of B.Sc.; and in medicine 10 took the degree of M.D. The University has the privilege of granting the degree of M.D. to 'any registered Medical Practitioner above the age of 40 years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his professional knowledge.' Formerly the number of such degrees that could be granted was unlimited, but it is now restricted to 10 every year, and the fee for the degree is fifty guineas. The General Council for 1883-84 contained 1519 members. It meets twice a year on the last Thursday of March and the last Friday of November. Under the Reform Act of 1867 St Andrews University unites with that of Edinburgh in returning a member to serve in parliament, the electorate consisting of the members of General Council. Among the distinguished rectors since 1859 have been Sir William Stirling-Maxwell, J. S. Mill, J. A. Froude, Lord Neaves, Dean Stanley, and Sir Theodore Martin; while connected with the University, either as professors or students, have been John Major, George Buchanan, John Knox, Andrew Melvil, James Melvil, Napier of Merchiston, the Admirable Crichton, Sir Richard Maitland of Lethington, Robert Rollock, the Marquis of Montrose, Samuel Rutherford, James Gregory (the inventor of the Gregorian telescope), Alexander Pitcairn, John Hunter, William Tennant (the author of *Anster Fair*), Thomas Chalmers, Sir David Brewster, James D. Forbes, John Tulloch, William Spalding, J. F. Ferrier, John Veitch, J. C. Shairp, Lewis Campbell, R. Flint, M. Forster Heddle, and H. A. Nicholson. Besides these the bishops and archbishops, from 1411 downwards, are all intimately associated with the history of the University.

The buildings of the United College stand near the centre of the N side of North Street, where they occupy three sides of a large quadrangle, 230 feet by 180. The site was originally that of St Salvator's College, the church of which occupied the S side of the quadrangle, while on the other three sides were the common hall, library, classrooms, and students' apartments. The church still remains, though greatly altered; but the other buildings having become ruinous were removed after the report of the University Commission of 1827, and the present classrooms on the N and E sides of the

quadrangle were erected between that date and 1847 at a cost of £18,600, the money being granted by Government. The entrance to the quadrangle is underneath a lofty tower at the W corner of the S side. It is a tall square structure, with a stumpy octagonal spire, the whole rising to a height of 156 feet. The College of St Leonard's church, immediately to the E, is now looked on as the parish church of St Leonards, its use for that purpose dating from the early part of last century. It contains a very elaborate monument to Bishop Kennedy, the founder of the college (d. 1466), said to have cost a sum equal to £10,000 sterling. It was greatly injured by the fall of the stone roof of the church about the middle of last century. The tomb was opened in 1683, when six silver maces were found in it, of which three were presented to the other Scottish Universities and the remaining three were retained by the University of St Andrews. One of these last, which was made in Paris by Bishop Kennedy's orders in 1461, is very fine. In the vestibule of the church is a flat stone marking the grave of Dr Hugh Spens, principal of the College 1505-29; and on the N wall is a marble monument erected by his brother officers to the memory of the eldest son of the late Provost Playfair—Lieutenant W. D. Playfair, who fell at Sobraon in 1846. There is a good museum; and in the hall are portraits of John Hunter, Sir David Brewster, James D. Forbes, all of whom were principals; of Professors Ferrier and Macdonald, and others. At the union of the colleges of St Leonard and St Salvator in 1747 the buildings of the former, which were in South Street, near the E end, were sold, and now the ruined walls of the chapel alone remain. When Dr Johnson and Boswell were so hospitably entertained by the St Andrews professors this building was used as a 'kind of greenhouse,' and, adds the Doctor, 'to what use it will next be put I have no pleasure in conjecturing;' but, as he had always been hindered by some excuse from entering it, he admits that it was 'something that its present state is at least not ostentatiously displayed. Where there is yet shame there may in time be virtue.' It was afterwards used as an outhouse, but the virtue came in 1838, when it was cleared out, and since then the ruin has been properly cared for. It contains a fine monument to Robert Stuart, Earl of March, who died in 1611, and another in memory of Robert Wilkie, principal of the college (1589-1611). The official residence of George Buchanan when he was principal here (1566-70), a short distance S of the chapel, was the property and residence of Sir David Brewster when he was principal of the United College (1838-59). St Mary's College occupies the site of the old Pedagogy on the S side of South Street, the college buildings and University library forming two blocks at right angles, the library and the principal's residence being on the N, and the lecture rooms and old dining-hall on the W. The library, a plain structure, built at the expense of the University in 1764, and since greatly improved in 1829, superseded an older building which had been used as a provincial meeting-place for the Scottish parliament. It is divided into four large halls, the principal one 76 feet long, 28 wide, and 28 high. There are portraits of Cardinal David Beaton, George Buchanan, John Knox, Adam Ferguson, Bruce of Grangehill and Falkland (professor of logic at Edinburgh), Archbishop Spottiswoode, George Wishart, and several of the chancellors. The nucleus of the present library was established in 1610 by the union of the libraries of the three colleges, and James VI., under whose auspices this took place, made a valuable gift of books to the new institution. Subsequent benefactors have been numerous, and there are now about 100,000 printed volumes and 150 MSS. Among the rarities may be specially mentioned a copy of the *Koran* that belonged to Tippoo Saib, a copy of Quinctilian (1465), a Latin translation of the *Iliad* (1497), and the *Phrases* of Stephanus, both of which belonged to George Buchanan, and contain notes in his handwriting; a copy of the Canons of the Council of Trent that belonged to James Melvil, a fine MS. of the works

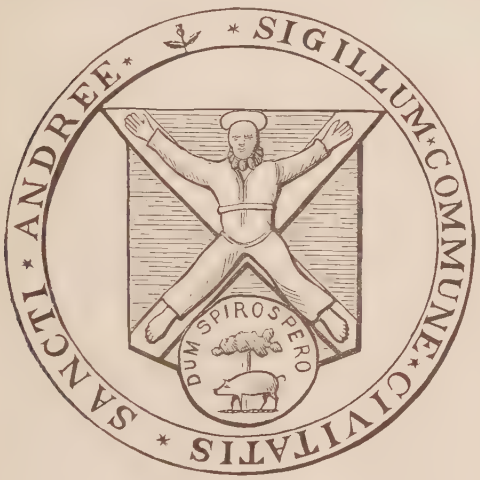
of St Augustine, a MS. of Wyntoun's *Cronykil*, written in the latter part of the reign of James IV.; and the original copy of the Solemn League and Covenant, subscribed at St Andrews in 1643, and containing upwards of 1600 signatures. To the S of the buildings are the college gardens. St Andrews College Hall, to the SSW of the Cathedral, opened in 1861, and belonging to a joint-stock company with a capital of £5000, serves as a residence for young gentlemen attending the University. It has accommodation for about 30 students, and is conducted by a warden, a tutor, and such other teachers as may be required.

The Madras College, off the S side of South Street near the W end, was opened in October 1833, and superseded the old grammar and burgh schools. It was founded in terms of a bequest by Dr Bell, who was the first to introduce the monitorial or Madras system of school management. Dr Bell, who was the son of a hairdresser in St Andrews, and was educated at the University here, became, after various vicissitudes of fortune, superintendent of a male orphan asylum at Madras under the Honourable East India Company, and there originated his monitorial system. At his death he left a very large fortune, £120,000 of which was to be spent in the erection and maintenance of schools on his favourite system, and of this sum £60,000 was set apart for St Andrews, while the sums of £52 and £25 paid by the town as salaries to the masters of the former grammar and burgh schools has, since the opening of the new institution, been paid over to its funds. At first there were only two masters, but now there are masters of English, classics, arithmetic and bookkeeping, mathematics, modern languages, writing, drawing, and gymnastics; second masters in English and classics, and a teacher of sewing. The grounds cover a space of about 4 acres, and the school buildings are ranged round a quadrangle near the centre. A detached building to the W, built subsequently, contains 3 additional classrooms, and accommodation is provided altogether for 1540 scholars. At the two front corners of the ground adjoining South Street are houses for the English and classical masters, which provide accommodation for a considerable number of boarders. The trustees of the institution are the provost, the ministers of the first and second charges, and the sheriff of Fife. Connected with it is the Madras College Club, founded in 1871. Under the burgh school board the East End and Infant schools, with accommodation for 250 pupils each, had in 1883 attendances of 204 and 174 respectively, and grants of £164, 3s. and £135, 15s. There are also 5 private boarding and day schools for boys, and 3 private schools for girls.

Trade, etc.—During the 15th and 16th centuries St Andrews was one of the most important seaports to the N of the Forth, and was resorted to by merchant vessels from Holland, Flanders, France, and all the trading districts in Europe. The number of vessels in port at the time of the great annual local fair called the Senzie Market—held in the priory grounds in April—is even said to have been from 200 to 300, but if this be so they must have been of small tonnage, and probably not larger than a fair-sized herring boat. The trade, however, seems to have departed during the Reformation troubles, and in 1656 Tucker, one of Cromwell's Commissioners of Customs—who described the town as 'a pretty neat thing which hath formerly been bigger, and although sufficiently humbled in the time of the intestine troubles, continues still proud in the ruines of her former magnificence'—mentions that there was only 1 vessel of 20 tons burden belonging to the port, while upwards of a century later we find that there were only 2 small vessels. By 1838 these had increased to 14 vessels of, aggregately, 680 tons, and bonded warehouses having been subsequently fitted up, the place became a head port and yielded a customs revenue of about £700 a year. A great trade also sprung up in the export to iron-works on the Tyne of calcined ironstone from workings near Strathkinness, but this did not last, and the port sank again to the

position of a sub-port, and the shipping trade, particularly since the opening of the railway, has become very small, and is confined to export of grain and potatoes; and import of coal, timber, guano, salt, and slates. The harbour, formed along the small natural creek at the mouth of the Kinness Burn, has a pier extending eastward for about 420 feet from high-water mark, and outer and inner basins. At low water it is dry except for the stream flowing through it, and even at high water there is not sufficient depth of water to admit fully-laden vessels of more than 100 tons, and the entrance, which is narrow, and is exposed to the roll of the sea when the wind is easterly, is dangerous. Two guiding lights—the one a red light at the end of the pier, and the other a bright white light on a turret of the cathedral north wall—when brought into line indicate a vessel's course for the harbour. There were belonging to the port, in 1882, 33 first-class, 16 second-class, and 5 third-class boats, engaged in the herring fishing, and connected with them were 145 resident fisher men and boys.

Municipality, etc.—Created a royal burgh in 1140, St Andrews is now governed by a provost, 4 bailies, a



Seal of St Andrews.

dean of guild, a treasurer, and 22 councillors, who also under the General Police and Improvement Act are police commissioners, but the police force itself forms part of that of the county. The corporation revenue is about £1500 per annum. The burgh boundaries were extended in 1860, and a thorough system of drainage was introduced in 1864-65. The old water supply has recently proved insufficient, and the question of a new supply is at present agitating the minds of the inhabitants. Gas is supplied by a private company, with works near the harbour. The town has a head post office, with money order, savings' bank, insurance, and telegraph departments, branch offices of the Bank of Scotland, Clydesdale Bank, Commercial Bank, and Royal Bank, a National Security Savings' Bank, agencies of 30 insurance companies, and several excellent hotels. A newspaper—the *St Andrews Citizen and Fife News* (1871)—issued on Saturday, is printed at Cupar-Fife. The public reading-room and library was established in 1845, and acquired in 1847 the books belonging to the old subscription library. In 1867, the books of the St Andrews subscription library were acquired by purchase, and subsequently in return for a sum of money voted by the town council from the Bell Fund, for the purpose of clearing off debt, the whole library was declared public property. Other institutions and associations are a branch of the Royal National Lifeboat Institution, with a lifeboat; a volunteer life brigade, with a rocket apparatus; a troop of the Fife Volunteer Light Horse, a battery of artillery volunteers, a company of rifle volunteers, a drill hall, baths, a cottage hospital, a literary and philosophical society (1838), 2 masonic lodges, a young men's Christian association, a horticultural society, an amateur choral society, an archery club, a curling club, the St Andrews Golf Club (the Mechanics from 1843 to 1851), the St Andrews Thistle Golf Club (1865), and the Royal and Ancient Golf Club already noticed. There is a weekly corn market on Monday, a fair on the second Monday of April, and feeing markets on the second Tuesday of August and the Monday after the 10th November. Sheriff small debt courts for the parishes of St Andrews, St Leonards, Kingsbarns, Dunino, Cameron, Forgan, Ferry Port on Craig, and Leuchars, are held on the third Mondays of January, April, July, and October. Justice of peace courts for granting licences for the sale of exciseable liquors for the county are held on the third Tuesday of April and the last Tuesday of October; and burgh licensing courts are held on the second Tuesday of April and the third Tuesday of October. The burgh unites with Cupar, Easter and Wester Anstruther, Crail, Kilrenny, and Pittenweem in sending a member to parliament (always a Liberal since 1837), and is the returning burgh. Parliamentary constituency (1885) 842; municipal constituency (1884) 1105. Valuation (1856) £15,404, 11s. 11d., (1885) £36,083, 4s. 6d. Pop. of royal burgh (1801) 3263, (1831) 4462, (1881) 6406; of the municipal burgh, with enlarged boundary (1861) 5141, (1871) 6244, (1881) 6458, of whom 3636 were females, and 6452 were in the parliamentary burgh. Houses (1881) 1235 inhabited, 73 uninhabited, and 7 being built. See also Martine's *History and Antiquities of St Rule's Chapel* (St Andrews, 1787), and his *Reliquiæ Divi Andreæ* (St Andrews, 1797); Grierson's *Delineations of St Andrews* (1807; 3d ed. 1838); *Liber Cartarum Prioratus Sancte Andree* (Bannatyne Club, 1841); C. J. Lyon's *History of St Andrews* (1843); C. Roger's *History of St Andrews* (1849); a paper on the 'Early Ecclesiastical Settlements of St Andrews,' by Dr Skene, published in the *Proceedings of the Society of Antiquaries of Scotland for* 1860-62; Walter Wood's *East Neuk of Fife* (Edinb. 1862); Ballingall's *Shores of Fife* (Edinb. 1872); and J. M. Anderson's *University of St Andrews* (Cupar, 1878).

St Andrews, a parish in the SE of the Mainland of Orkney, whose church stands near the W shore of Deer Sound, 6 miles ESE of the post-town, Kirkwall, whilst Deerness church on the E coast is 12 miles ESE of Kirkwall by road, though only $9\frac{1}{4}$ as the crow flies. It is bounded NW by Kirkwall parish and Inganess Bay, N by Shapinsay Sound, NE, E, and SE by the North Sea, and SW by Holm parish; and it is deeply indented by Deer Sound, which, penetrating the land for $5\frac{7}{8}$ miles south-westward and south-south-eastward, alternately broadens and contracts, from $3\frac{3}{8}$ miles to 1 mile, from $1\frac{1}{2}$ mile to 5 furlongs, and from 2 miles to $2\frac{1}{4}$ furlongs. The parish thus consists of two natural divisions, connected by a sandy isthmus only 250 yards broad—St Andrews proper to the W and Deerness to the E. The former has an extreme length from NW to SE of $5\frac{3}{8}$ miles, and a varying width of $\frac{1}{2}$ mile and $5\frac{3}{8}$ miles; the latter, in outline rudely resembling a topsy-turvy kite, has an extreme length from SSW to NNE of $4\frac{3}{4}$ miles, and an extreme breadth of $3\frac{3}{4}$ miles; and the area of the whole is 12,830 acres. The coast is in places sandy, in places rocky, and sometimes precipitous; and the interior rises in St Andrews to 183, in Deerness at the Ward Hill to 285, feet above sea-level. The shallow fresh-water Loch of Tankerness ($7 \times 4\frac{1}{2}$ furl.; 13 feet above the sea) lies 5 furlongs N of St Andrews church. The predominant rock is Old Red Sandstone, with interesting dykes of trap; and the soil is capable of much improvement. A curious cavern, the Gloup, has been noticed separately. Tankerness Hall, near the NW shore of Deer Sound, is the chief residence. In the presbytery of Kirkwall and synod of Orkney, the civil parish since 1845 has been ecclesiastically divided into St Andrews and Deerness, the former a living worth

£308. St Andrews church was built in 1801, and contains 400 sittings. There is also a Free church of St Andrews; and three new public schools—Deerness, St Andrews, and Tankerness—with respective accommodation for 155, 55, and 80 children, had (1884) an average attendance of 99, 44, and 41, and grants of £91, 9s. 6d., £42, 16s., and £40, 2s. 6d. Valuation (1884) of St Andrews, £2094, 9s.; of Deerness, £2178, 11s. Pop. of entire parish (1821) 1548, (1861) 1681, (1871) 1733, (1881) 1695, of whom 828 were in St Andrews and 867 in Deerness.

St Andrews-Lhanbryd, a parish containing the village of Lhanbryd in the NE of the county of Elgin and immediately E of the burgh of Elgin. It is bounded N by the parish of Drainie, SE by the parish of Urquhart, E by the parish of Speymouth, S by the parish of Rothes, SW by the parish of Elgin, and W by the parishes of Elgin and Spynie. At the centre of the W side the boundary is formed by the river Lossie for 1⅝ mile below the bend at Roy's Pot; at the NW corner for ⅞ mile by the Spynie Canal; and near the SE corner for ¾ mile by one of the head-streams of the Red Burn; elsewhere the line is artificial. The shape of the parish is highly irregular. There is a compact northern portion measuring fully 5½ miles from the point where the parishes of Drainie, Urquhart, and St Andrews meet on the N to Mains of Cotts on the S, and with an average breadth of about 2 miles. From the SE corner of this a long straggling projection passes southward by Cranloch, and after narrowing to about 200 yards at Oldshields, broadens out again into the triangular portion of Teindland about 2 by 1¼ miles. The extreme length of the parish, from the point already mentioned on the N, south-south-westward to the extreme southerly point at the top of Findlay Seat (861 feet), is 8½ miles; and the total area is 9359·544 acres, of which 162·983 are water. The surface is flat in the N, undulating in the centre—many of the hillocks being covered with thriving plantations—and the southern prolongation is a rough moorland, the highest point of the parish being over 1000 feet, at the SW corner of this projection. The drainage is carried off by the river Lossie, which, entering near the centre of the W side, flows first eastward and then northward through the parish in a course of about 5 miles; by the Lhanbryd or Longhill Burn, which flows along the centre, and by the Red Burn in the extreme S. In the N end of the parish is all that remains of the old Loch of Spynie, now reduced to a portion 5 furlongs in length by 1½ in breadth; and at the point where the southern prolongation is given off is Loch-na-bo (4 × 1½ furl.), and two smaller lochans beside it. The soil is a sandy loam, which is, however, fertile. About 4000 acres are under tillage, about 700 under wood, and much of the rest is waste ground. The underlying rock is mostly an impure limestone, and masses of rocks of Jurassic age are found scattered through the soil and subsoil. On the west side, N of Elgin, at Linksfield, a curious patch of rock, supposed to be of Rhætic age, was once laid bare, but the section is no longer visible. The parish is traversed across the centre for 3½ miles by the great main road from Inverness to Aberdeen, and the Forres and Keith section of the Highland railway is a little to the S of this road. Two sections of the Great North of Scotland railway system also pass through the northern and western portions of the parish. To the SE of Lhanbryd station are the remains of a stone circle, and many fine flint and stone weapons have been found at several places. The portion of the parish to the N was the chapelry of Inchbroom, that to the E was the chapelry of Lhanbryd—the church of St Bridget—and that to the W the chapelry of Kilmalemnoc, the last two dating from Culdee times. On the rising ground on the centre of the W side, on the road from Inverness to Aberdeen, formerly stood a stone cross marking the point where Elgin Cathedral first became visible. The adjoining farm is still called Stonecross-hill. The old churches of Lhanbryd and St Andrews are gone, but the churchyards remain, the former at the village and the latter at a bend of the Lossie near Kirkhill. The tower of Coxton is separately noticed. Besides the village of Lhanbryd lying along the road from Inverness to Aberdeen near the E side of the parish, St Andrews contains also part of the burgh of Elgin. The village, which has a station on the Highland railway, 3½ miles E of Elgin, has a number of well-built houses, the whole place having been re-arranged and laid out in 1854 under the direction of the trustees of James, second Earl of Fife. There is a post office under Elgin. The churchyard near the centre of the village contains one or two old monuments. There is a wool mill, and besides the industries connected with the Elgin portion—comprising an iron-foundry, large wool mills, and a saw and flour mill—there is a distillery at Linkwood on the SW, which was greatly enlarged and extended in 1875. The residences are Pitgaveny House in the N and Dunkinty House on the SW. The former—the locality of which is identified by Dr Skene with the Bothgouanan where King Duncan was killed—is a four-story edifice, 'after a Portuguese model;' and the latter is a good building with Scottish baronial features, erected in 1876-78.

The principal landowner is the Earl of Fife, and 4 others hold each an annual value of £500 or upwards, 3 hold each between £500 and £100, 3 hold each between £100 and £50, and there are a few of smaller amount. The parishes of St Andrews and Lhanbryd were united in 1780, and the conjoint parish is in the presbytery of Elgin and the synod of Moray. The church is near the centre of the parish, and the living is worth £364 a year. Under the school board St Andrews-Lhanbryd and Cranloch schools, with accommodation for 175 and 100 pupils respectively, had, in 1884, attendances of 134 and 49, and grants of £152, 0s. 4d. and £45, 8s. 10d. The latter is a combination school for the parishes of Elgin and St Andrews-Lhanbryd. Valuation (1860) £6654, (1884) £7894. Pop. (1801) 799, (1831) 1087, (1861) 1402, (1871) 1346, (1881) 1396, of whom 675 were males and 721 females. Houses (1881) 269 inhabited, 6 uninhabited, and 1 being built. —*Ord. Sur.*, shs. 95, 85, 1876.

St Boswells, a village and a parish of NW Roxburghshire. The village of Lessudden or St Boswells stands near the right bank of the river Tweed, 1⅜ mile ESE of St Boswells or Newtown station (in Melrose parish), and 4 miles SE of Melrose. A place of high antiquity, it is thought to have got its original name, Lessedwin ('manor-place of Edwin'), either from Eadwine of Northumbria (586-633) or from some yet earlier prince. It contained sixteen strong bastel houses in 1544, when it was burned by the English; and now it consists of one long street, extending north-eastward from St Boswells Green. This common, about 40 acres in extent, is the scene of a handball match on 12 March, and of a fair on 18 July, or the following Monday if the 18th falls on a Sunday. At the close of last and the beginning of the present century, St Boswells fair was the greatest in the South of Scotland for lambs, cattle, horses, wool, and general business; and from £8000 to £10,000 changed hands in the course of the day. It was largely attended by the Tinklers and Potters of the Border Counties. In his *History of the Gipsies* (2d. ed., New York, 1878) Mr Simson describes their encampment; and states that on one occasion 'there were upwards of 300 Gipsies in the place. Part of them formed their carts, laden with earthenware, into two lines, leaving a space between them like a street. In the rear of the carts were a few tents, in which were Gipsies, sleeping in the midst of the noise and bustle of the market; and numbers of children, horses, asses, and dogs, hanging around them. . . . Any one desirous of viewing an Asiatic encampment in Scotland, should visit St Boswells Green, a day or two after the fair.' There is one good inn, the Buccleuch Arms; and at the end of the Green are the kennels of the Buccleuch Foxhounds (56 couples), erected by the late Duke of Buccleuch about 1830. Braeheads, a ridge to the N of the village, commands a most exquisite view of the ruins of Dryburgh, the winding

Tweed, and the triple Eildons. Pop. of Lessudden (1831) 433, (1861) 447, (1871) 556, (1881) 555.

The parish is bounded NE by Mertoun in Berwickshire, SE by Maxton and Ancrum, SW by Bowden, and NW by Bowden and Melrose. Its utmost length, from NE to SW, is 3⅝ miles; its utmost breadth is 2 miles; and its area is 3198½ acres, of which 43½ are water. The Tweed curves 3 miles south-eastward, north-eastward, and south-by-eastward along all the Berwickshire border, though the point where it first touches and that where it quits the parish are but 1¼ mile distant as the crow flies. It is spanned here by two suspension bridges, one erected by Lord Polwarth in 1880; and its bank on the St Boswells side is steep and wooded. The surface sinks to 200 feet above sea-level along the Tweed, and rises gently thence to 268 feet at Benrig, 326 at Hiltonshill, and 538 near Maxpoffle, thus everywhere being dominated by the Eildon Hills (1385 feet) in the neighbouring parish of Bowden. Red sandstone, of good building quality, is the predominant rock; and the soil is variously alluvium, black loam, and stiff clay. Rather less than 200 acres are under wood; and most of the remainder is in tillage. The parish is named after Boisil, who from about 650 to 661 was successively prior and abbot of the Columban monastery of Old Melrose, and the fame of whose sanctity attracted thither the youthful St Cuthbert. Not a vestige remains of the ancient village of St Boswells, which stood near the parish church, 7 furlongs SE of Lessudden. This parish was the lifelong residence of, and has given designation to, John Younger (1785-1860), the shoemaker-fisherman-poet, who was born at Longnewton, and whose interesting Autobiography was published at Kelso in 1882. Near the village is Lessudden House, 'the small but still venerable and stately abode of the lairds of Raeburn.' Other mansions are Benrig, Elliston, Maxpoffle, Maxton Cottage, and The Holmes; but only one out of seventeen proprietors holds an annual value of more than £500. St Boswells is in the presbytery of Selkirk and the synod of Merse and Teviotdale; the living is worth £375. The parish church is an old building, and, as enlarged in 1824, contains over 300 sittings. There is also a Free church; and the public school, with accommodation for 125 children, had (1884) an average attendance of 112, and a grant of £95, 3s. Valuation (1864) £6403, 12s. 8d., (1884) £9029, 4s. 11d. Pop. (1801) 497, (1831) 701, (1861) 865, (1871) 973, (1881) 959.—*Ord. Sur.*, sh. 25, 1865.

St Catherines. See Catherines.

St Cuthberts. See Edinburgh.

St Cyrus, formerly Ecclesgreig, a parish, with a village of the same name, in the extreme S of the county of Kincardine. It is bounded NE by the parish of Benholm, SE by the North Sea, SW by Forfarshire, and NW by the parishes of Marykirk and Garvock. Along the sea-coast the boundary is natural, as it is also at the S corner and along the SW, where, as noticed in the article on the parish of Montrose, it follows for 4 miles partly the present and partly an old course of the river North Esk. For 2⅞ miles on the NW side it follows the course of the stream running along the Den of Canterland, and elsewhere it is artificial. The shape of the parish is a rectangle with irregular sides, the greatest length, from NE to SW, being 5¼ miles; and the average width, north-westward from the sea-coast, 2½ miles. The area is 8718·608 acres, of which 390·561 are foreshore and 78·698 water. The surface lies on the slope from the hill of Garvock to the sea, and is broken up into a series of undulations running from NE to SW, attaining 486 feet at the Hill of Morphie, and 600 near Maryland in the NW corner of the parish. Almost the whole of the surface is under cultivation or woodland. The soil is everywhere a good sound loam, strong in some parts and light in others, but very fertile. It lies on a subsoil of decomposed red sandstone or volcanic rock, varying from clay to gravel. The underlying rocks are Old Red Sandstone—which is quarried at Lauriston—or interbedded volcanic strata, which at Denfinella and elsewhere contain very fine agates and other minerals. In the Den of Canterland fish remains are found in the shales constituting the upper fish bed of the Old Red Sandstone of Forfar and Kincardine. There are also, at several places, bands of limestone which are not now worked, though former quarrying operations in connection with them led, at the E corner of the sea-coast, to rather disastrous results. 'On the Kincardineshire coast,' says Sir Charles Lyell, 'an illustration was afforded, at the close of the last century, of the effect of promontories in protecting a line of low shore. The village of Mathers, 2 miles S of Johnshaven, was built on an ancient shingle beach, protected by a projecting ledge of limestone rock. This was quarried for lime to such an extent that the sea broke through, and in 1795 carried away the whole village in one night, and penetrated 150 yards inland, where it has maintained its ground ever since, the new village having been built farther inland on the new shore;' and this new hamlet had to be protected by a stone bulwark. In the SW the drainage is carried off by the North Esk and the burns of Canterland, Morphie, Dannies Den, and Commieston, which flow into it. To the E of the village is the small burn of Woodston, and in the NE end of the parish are the burns of Lauriston and Denfinella, all flowing direct to the sea. The Esk and all the other streams flow through deep and romantic dells, the gorges of the burns of Lauriston and Denfinella being particularly fine and well-wooded. The latter, in which there is a high waterfall, and which is spanned by a very lofty viaduct of the Montrose and Bervie railway, is separately noticed. On the North Esk is a pool known as the Ponage or Pontage Pool, which was, in the days when bridges were not, long the abode of a water-kelpie. On one occasion the monster having appeared as a horse, was caught and bridled—presumably with a witch bridle—and kept in captivity for a considerable time, during which he was employed in drawing stones to Morphie for a castle that was then being erected, but of which only the site now remains. A servant having, however, incautiously removed the bridle to allow him to get some food, the kelpie immediately vanished through the wall laughing with joy, and calling out—

> 'Sair back and sair banes,
> Carrying the laird o' Morphie's stanes.
> The laird o' Morphie canna thrive
> As lang's the kelpie is alive.'

a rhyme which he used often afterwards to repeat as he showed himself in the pool, a circumstance that has been turned to advantage in the local poem of *John o' Arnha.* The coast is mostly low and sandy, though at several points there are rocky promontories. From the centre of the coast-line south-westward to the mouth of the North Esk there is a stretch of sandhills, bounded on the NW by an old line of cliff, in some places from 150 to 200 feet high, but gradually becoming lower as it approaches the North Esk. The view from this across towards the Red Head and away beyond by the Isle of May towards the Firth of Forth is very fine. In 1858 a cave of considerable size, with many bones and heaps of edible shells lying along the floor, was discovered in these cliffs about half a mile from the North Esk, but was shortly afterwards rendered inaccessible by a fall of rock at the mouth. Near the river, in the stackyard of the farm of Stone of Morphie, is a solitary standing-stone, but nothing is known as to its history. It is traditionally connected with the Danes, and said to have been erected to mark the grave of one of their leaders — Camus — who was killed here, and whose memory is also preserved in the name of the neighbouring farm of Commieston, while the Danes themselves give name to Dannies (Dane's) Den. Several stone coffins have been found in the neighbourhood, but defeated armies have seldom time to bury their dead in stone coffins, much less erect memorial stones. Amid the sandhills, near the centre of the base of the line of inland cliff already described, is the small parish burying-ground known as the Nether Kirkyard. It was probably the site of the old Culdee church from which the parish

derives its name, Ecclesgreig being 'the church of Grig.' This Grig or Giric or Curig, whom Chalmers describes as Mormaer of the tract of country between the Dee and Spey, but who in reality was associated in the government of the kingdom of Scone with Eocha, who was the grandson of Kenneth mac Alpin, reigned from 878 to 889. As guardian to a king whose succession was disputed, and who was a Briton of Strathclyde, he seems to have tried to win over the clergy of the Scottish Church by freeing them from all secular exactions and services. In the Pictish Chronicle his name appears as Ciricius, and as he seems to have been named after St Cyr or Ciricus, a martyr of Tarsus, the church was dedicated in honour of that saint, and hence the name St Cyrus. The church of 'Saint Ciricus of Eglesgirg' was given to the priory of St Andrews by Bishop Richard (1163-77), and the grant was confirmed by King William the Lyon. The adjacent estate is still called Kirkside, and the old name is preserved in connection with Ecclesgreig House, the former name of which was Mount Cyrus. The church remained that of the parish till 1632, when a new one was erected on the site of the present building. A dependent chapel dedicated to St Laurence was at Chapelfield, ½ mile N of Lauriston House. At the point of Milton Ness, 1¼ mile E of the village, are the remains of an old castle called the Kaim of Mathers, said to have been built by Barclay of Mathers as a place of refuge from the vengeance of the law, by which he was threatened for his share in the slaughter of Sir John Melville. (See GARVOCK.) In October 1715 a band of Jacobites from Farnell and Kinnaird placed an Episcopal clergyman in possession of the church and refused the minister admission, nor did he preach again till the 5th February 1716, when 'the rebels having all passed by this church,' he 'repossest himself of his pulpit; but on this and the two following Sundays he had but a small congregation, the people not being able to leave their houses for fear of finding them plundered before their return by the Swiss and Dutch soldiers who were in the neighbourhood.' The principal mansions are Lauriston and Ecclesgreig. The former is separately noticed, and the latter is the residence of F. G. Forsyth-Grant, Esq. Lauriston was long in possession of the family of Straton, one of whom was 'the stalwart laird of Lawriestoun' who 'was slain into his armour scheen' at the battle of Harlaw. A later laird, George Straton, was one of the early Reformers. His brother David was burnt for heresy at Greenside in Edinburgh in 1534, and his son, Sir Alexander, was moderator of the General Assembly held at Aberdeen in 1605. The last of the family was Sir Joseph M. Straton of Kirkside, K.C.B., a Peninsular and Waterloo hero, who died in 1846, and is buried in the Nether Kirkyard. In the SE corner of the same burying-ground is also interred George Beattie (1786-1823), a lawyer in Montrose, and the author of *John o' Arnha* and other poems of some local celebrity, who was a native of the parish. In a fit of despair at being jilted by a Miss Gibson, daughter of the then farmer at Stone of Morphie, he committed suicide close to the spot where now stands the tombstone erected to his memory 'by the friends who loved him in life and lamented him in death.' Another distinguished native is David Herd (1732-1810), editor of the first classical collection of Scottish songs and ballads—*Ancient and Modern Scottish Songs and Heroic Ballads* (Edinb. 1769-74). The Rev. Alexander Keith, D.D. (1791-1880), the writer on prophecy, was minister from 1816 till 1840. The village stands on high ground overlooking the sea near the middle of the coast of the parish. It has a post office under Montrose, and near it is the battery in connection with the St Cyrus company of the Forfar and Kincardine Artillery Volunteers. The parish is traversed near the coast by the main line of road from Dundee by Montrose to Aberdeen, which crosses the North Esk by a good stone bridge erected in 1775-80; and parallel to this road and between it and the sea is the Montrose and Bervie section of the North British railway system, with stations at the North Esk, at the village of St Cyrus, and at Lauriston, 3¼, 5¼, and 6¼ miles respectively N of Montrose. There are also a large number of very good district roads. The only industries are farming, and operations connected with the quarry already mentioned and with the valuable salmon fishings along the coast and in the North Esk.

St Cyrus is in the presbytery of Fordoun and synod of Angus and Mearns, and the living is worth £357 a year. The parish church, at the village, built in 1853-54, is a good building with a tall spire, and contains 530 sittings. There is also a Free church with 500 sittings, built in 1844. Under the school board the St Cyrus and Shortside schools, with accommodation for 222 and 39 pupils respectively, had in 1884 attendances of 154 and 38, and grants of £139, 10s. and £30, 3s. The principal landowners are D. S. Porteous of Lauriston, and F. G. Forsyth-Grant of Ecclesgreig, and there are several other proprietors. Valuation (1856) £12,809, (1885) £17,614, 13s. 1d., *plus* £2801 for the railway. Pop. (1755) 1271, (1801) 1622, (1831) 1598, (1861) 1552, (1871) 1585, (1881) 1487, of whom 728 were males and 759 females. Houses (1881) 330 inhabited and 33 uninhabited.—*Ord. Sur.*, sh. 57, 1868.

St Fergus, a village and a coast parish of Buchan, belonging still in certain respects to Banffshire (detached), but locally situate in NE Aberdeenshire. The village lies 1 mile inland, and 5 miles NNW of Peterhead, under which it has a post office.

The parish is bounded NW and N by Crimond, E by the German Ocean, S by Peterhead, and SW by Longside and Lonmay. Its utmost length, from NNW to SSE, is 6⅝ miles; its breadth varies between 3 furlongs and 4 miles; and its area is 9180¼ acres, of which 285 are foreshore and 39¼ water. The low flat shore, 6½ miles in extent, is bordered landward by a natural rampart of clay and sand hills, which, rising in places to 50 feet above sea-level, and thickly covered with bent-grass, protect the interior from encroachments of drifting sand. Extending along the coast for several miles, but of unequal breadth, within this ridge, is ground called the Links of St Fergus, constituting, probably, one of the pleasantest plains in Scotland, and producing—from its wild thyme, white clover, and short grass, it is thought—mutton of peculiar delicacy and fineness of flavour. Along the shore is an inexhaustible quantity of shells, which have been advantageously used as manure. The river UGIE winds 4 miles east-south-eastward along all the Peterhead boundary to its mouth in the German Ocean; and its feeder, the Burn of Ednie, runs 3⅞ miles south-south-eastward along all the south-western border. A canal, which was cut near the Ugie towards the close of last century, has long been entirely useless except for supplying water to a few farms. The surface exhibits a beautiful succession of rising grounds and valleys; but there is no hill, the highest point (164 feet) being 2 miles WNW of the village. The rocks comprise granite, gneiss, trap, quartz, and crystalline limestone. The soil of the seaboard district is sandy loam and moss, of the middle district a strong adhesive clay, and of the western district reclaimed moor and moss. Fully four-fifths of the entire land area are in tillage; barely 30 acres are under wood; and the rest is pasture, links, moss, etc. INVERUGIE Castle, which is noticed separately, was the birth-place of the great Field-Marshal Keith (1696-1758). See PETERHEAD. The name of the parish was Inverugie, or, occasionally, Langley, till 1616, when it was changed to St Fergus, most likely after the ancient patron saint, an Irish bishop of the Roman party, who built a basilica here in the first half of the 8th century. St Fergus is in the presbytery of Deer and the synod of Aberdeen; the living is worth £325. The parish church, built in 1869, contains 658 sittings. There are also a Free church and a Baptist chapel (1810); and 3 public schools—the Central (male), the Central (female), and the North—with respective accommodation for 120, 75, and 85 children, had (1884) an average attendance of „ , 60, and 65, and grants of £0, £44, 14s., and £58, 17s.

Valuation (1860) £7082, (1885) £8701, 16s., of which nearly six-sevenths belonged to Mr Ferguson of Pitfour. Pop. (1801) 1270, (1831) 1334, (1861) 1608, (1871) 1633, (1881) 1527.—*Ord. Sur.*, sh. 87, 1876.

St Fillans. See FILLANS.

St Germains, a plain mansion in Tranent parish, Haddingtonshire, 2 miles NE of Tranent town and 2½ SW of Longniddry station. It was built towards the close of last century by David Anderson, Esq., at one time secretary to Warren Hastings; and by his descendant it was sold a few years ago to the trustees of the late Chs. Stewart Parker Tennent, Esq. of Wellpark, Glasgow. The Knights Hospitallers here had an establishment, founded in the 12th century.—*Ord. Sur.*, sh. 33, 1863. See Jn. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

St Kilda, called anciently and by the natives Hirta or Hirt (Gael. *Iorta*), is the chief islet of a rocky group included among the Hebrides, though lying far out in the Atlantic, and quite detached from these islands. Situated in N lat. 57° 48′ 35″, and W long. 8° 35′ 30″, St Kilda is nominally included in the parish of Harris in Inverness-shire. It lies 40 miles almost due W of Griminish Point, the NW extremity of North Uist, and about 76 nautical miles NW of Dunvegan in Skye. It measures 3 miles from E to W, 2 from N to S, and about 7 in circumference; and its area has been estimated at from 3000 to 4000 acres. In shape it resembles a roughly formed stunted letter H, sloping NW and SE; and its coasts are faced with lofty precipitous cliffs, rising sheer out of deep water, at nearly all points except the landing place in the SE, or village bay. In the NW bay also, the cliffs are lower, and in favourable weather a landing may sometimes be effected there. The other islets of the group are uninhabited; but serve as grazing ground for the St Kildans' sheep, and a breeding place for myriads of seafowl. They are the following—The Dune, a precipitous and jagged peaked islet forming the southern horn of the village bay, and only separated from St Kilda by a narrow passage of sea; Soa, or the Sheep Island (1031 feet), divided from the NW extremity of St Kilda by a strait 400 yards across, in which rise 3 lofty needle rocks, or 'stacks;' Borrera (1072 feet) between Stack-an-Armin and Stack Lü, 3½ miles towards the N; and Levenish (200 feet), a small rocky islet, 1½ mile SE of the Dune. The prevailing feature of all these islands is the precipitous nature of the cliffs of which they are composed; but apart from their picturesque aspect, they are entirely subsidiary to the inhabited island in interest. Between the bays at either end of St Kilda rises a high rocky ridge, forming the main body of the island, and rising into the 4 principal summits or 'tops' of Conagher (1220 feet), Mullach-sceal, Mullach-geal, and Mullach-osterveal or oshival. The sides of these descend sheer into deep water; and the precipice of Conagher is said to be the deepest perpendicular precipice in Great Britain. There are several small streamlets flowing from the high lands; and among the wells and springs are St Kilda's Well and the Well of Virtues.

The climate is on the whole mild, as might be inferred from its situation, though sometimes damp mists, severe frosts, heavy snowstorms, and tempestuous winds fall upon the little community. No trees or shrubs grow on the island; but the grass is plentiful and nutritious as pasture. The only wild animal is the mouse; but the islets swarm with myriads of sea-fowl—fulmar, puffins, guillemots, razor-bills, and solan geese,—which annually supply the islanders with great part of their wealth. The last-named birds do not breed on St Kilda but only on the smaller islets, and chiefly on the detached 'stacks' near Borrera. The geologic formation of St Kilda has not been scientifically determined, but Mr Sands says that the hills for several hundred feet are formed of sandstone, above which cliffs of igneous rock, trap, granite, etc., are found. The cultivated soil, though black, yields now a somewhat poor return to the labour spent upon it by the industrious natives; but visitors are generally impressed with the brilliant verdure of the pastures and hills. The husbandry was long of the most primitive description, the *caschrom* or spade-plough being used up till 1830; but more modern implements have now been introduced into the island, and the people show much industry in fencing their fields and preparing the soil. In 1758 about 80 acres were estimated to be under tillage, and barley was the chief crop. Now only about half that area is in cultivation; and the chief crops are potatoes, oats, and bere. A few turnips and cabbages are also grown. A curious agricultural feature on the islands is formed by the *cleits* or *claetyan*, little pyramidal huts of dry-stone, 8 to 10 feet in diameter, and 4 to 5 high, used formerly to dry the sea-birds before salt was introduced, but now to protect the crops when cut. These are very numerous; though the estimate of 5000 supplied to one visitor is certainly exaggerated. The pasturage is sufficient and good in summer; but the sheep receive little attention from their owners. At the end of the 17th century there were about 2000 sheep on the group, in 1841 about the same, in 1861 about 1500, and in 1877 between 1000 and 1200, though the islanders are averse to revealing the true number, as they pay a rent to the proprietor of the island proportioned to the size of their flocks. The sheep were for a long time a peculiar breed, but have been improved by crossing. The mutton is good; and the wool, which is *plucked* from the sheep, not shorn, is generally of a light dun colour. There are about 50 cows of the West Highland breed on the island. The young cattle are annually purchased by the landlord, who removes them from the island. There are now no horses on St Kilda, though in 1697 there were 18, and in 1841, 3 or 4. They are said to have been shipped away by a former lessee of the island, on the ground that they injured the grass. There is an imported breed of mongrel collie dogs, used in catching puffins; every house possesses a cat; but a recent visitor to the island affirms that there were only 2 hens upon it. In 1877, 16 families, as crofters, paid each £2 per annum for their holdings, while the rest of the inhabitants ranked as cottars. In 1815 the rental of the island was worth about £40; in 1841, £60; and from £90 to £100 is the present estimated return. The rents are paid in kind; feathers, oil, cloth, cheese, cattle, tallow, and ling being the chief articles exported. Although the surrounding seas abound with fish, fishing is rather neglected by the St Kildans. They are shy of fish-diet, asserting that it produces an eruption on the skin. The capture of sea-fowl is the chief occupation of the islanders. The men are bold and expert cragsmen; suspended only by slender ropes, they fearlessly explore the perpendicular cliffs of their island. The fulmars are captured for the sake of the oil the young birds have in their stomachs; and the other gulls are taken for their feathers. The women employ themselves in catching puffins on the adjacent islands in the season; and immense numbers of birds are annually killed, without causing any appreciable lessening of the numbers that hover about the islands. The only manufacture is that of coarse tweed and blanketing from the wool of the sheep. The women spin the thread and dye it; while the men weave it into cloth; and, moreover, make all the garments required of it, both for themselves and for the women. Mr Sands gives the following as the exports from St Kilda for 1875, and the price paid to the inhabitants, showing a total value of £250.

		£	s.	d.
Cloth,	227 yards of 47 inches and thumb,	25	10	0
Blankets,	403 yards of 47 inches and thumb,	27	0	0
Fulmar Oil,	566 gallons,	45	6	0
Tallow,	414 lbs.,	6	12	0
Black Feathers,	1494 lbs.,	26	5	0
Grey Feathers,	1179 lbs.,	17	10	0
Cheese,	646 lbs.,	11	9	0
Fish,	1080 marketable,	31	10	0
1 Year Old Cattle,	20 head,	60	0	0

There is but one village on St Kilda, situated at the

head of the E bay, on comparatively level ground at the foot of steep and lofty hills. It contains a church, a manse, a factor's house, a store, 14 zinc-roofed and 2 thatched cottages arranged in a crescent, and standing from 15 to 20 yards apart from each other. The zinc-roofed cottages were built in 1861-62 by the late proprietor after a severe storm had unroofed the former primitive hovels, many of which still stand, and are used as byres or cellars. The church, a plain and substantial building with four windows, a slated roof, but an earthen floor, cost £600. The manse, the factor's house (used only for about 3 days in the year), and the storehouse are all slated houses. The little burial-place behind the village is walled, and the gate is kept closed; but the interior is as neglected as most Highland cemeteries. The St Kildans are exceedingly primitive in their habits; but they are more intelligent than their isolation seems to promise. They are for the most part fair-complexioned, but some are swarthy; and though inclined to be stout, they are active and hardy. The women are comely; some are said to be beautiful. The average height of the male inhabitants is 5 feet 6 inches. They are a very prolific race, but the new-born infants are peculiarly liable to be fatally seized with *tetanus infantum*, from a cause never satisfactorily explained. It is said that 8, and even 9 out of 10, infants born on the island die from this disease. When once past the dangerous age the children are healthy and strong. Both the juvenile and adult inhabitants are liable to a feverish cold, which they call 'the boat-cold,' because they believe it attacks the island whenever a boat from the outer world touches on their shores. Imbecility is almost unknown. Though nearly all can read the Gaelic Testament, only a few can write in the vernacular; and none can speak English, except of course the minister. The St Kilda music was formerly famous among the Hebrides; but the inhabitants are not now specially musical. Their morality is good; crime is unknown; and they adhere to the somewhat rigid piety of two generations ago. The entire population belongs to the Free Church, whose minister on the island receives a stipend of £80; and acts as the substitute for the schoolmaster. The dress of the inhabitants is made of the native cloth; and resembles the ordinary lowland costume in Scotland; the kilt is not worn even by children. The food is chiefly seafowl, mutton, milk, and eggs. Besides the name of the minister there are only five surnames now known on the island, viz., Gillies, Macdonald, Ferguson, Mackinnon, and Macqueen. The population in 1697 was said to be 180; in 1758, 88; in 1795, 85; in 1815, 103; and in 1841, 105. The first government census took place only in 1851, and returned the population at 110; in 1861 it was 78; in 1871, 71; and in 1881, 77, of whom 44 were females. In 1856, 36 inhabitants emigrated to Australia; and in 1864, 8 were drowned by a boating accident.

St Kilda is the property of MacLeod of MacLeod, who purchased it for £3000 about 1872. It has, however, been for centuries in the MacLeod family. Lord Dunmore, proprietor of South Harris, is the feudal superior of the island, and is entitled to receive an annual feu-duty of one shilling. The intercourse of St Kilda with the outer world is maintained by means of the factor's boat, which visits it once a year, and the chance visits of yachts in summer.

The old name of the island appears in the forms Hirt, Hirth, Hirta, and Hyrtha, and is referred to the Gaelic *h-Iar-tir*, 'the west country.' The inhabitants have a proverb, 'Hirst to Perst' (Perth), indicating their distance from the centre of the kingdom. The name St Kilda is probably connected with the Culdees, as the shadowy chronicler Gildas does not usually figure as a saint, and no more authentic representative of the name is found in history. Hirt appears in a charter of the 14th century by which the island and other lands are granted by John, Lord of the Isles, to his son Reginald. It is confirmed by Robert II. The island next passed to Macdonald of Sleat, and later to the MacLeods of Dunvegan, who have held it for three centuries. James Boswell at one time thought of buying St Kilda. In 1615 it was invaded and ravaged by 'Colkitto;' in 1724 it was depopulated by smallpox, only 4 adults being left alive to support 26 children; from 1734 to 1742 Lady Grange was confined to the island by her cruel and powerful husband Lord Grange; and tales of her sojourn still linger among the people.

In 1697 three chapels are said to have existed on the island, and were dedicated to Christ, Columba, and St Brendan. The only relic of these is a stone, marked with a cross, built into one of the houses. In the Glen Mhor or Amazon's Valley, at the head of the N bay, there stood a pyramidal stone hut called the Female Warrior's house—a lady who is said to have hunted from St Kilda to Harris, at a time when the sea did not flow between them. On Borrera is a dome-roofed hut called the Stallir House, and related to have been the abode of a hermit; and on the Dune are the remains of an ancient fort. Subterranean dwellings, stone implements, and pottery have also been found.

The unique and romantic situation of St Kilda have, from comparatively early times, attracted a good deal of interest to the lonely little island. Sir Walter Scott notices it in his *Lord of the Isles* (Canto i., st. 8); and David Mallet makes it the scene of his poem *Amyntor and Theodora; or, The Hermit.* Lord Brougham visited the island in 1799.

Notices of the island occur in Fordun, Boethius, Buchanan, Camden, Sir Robert Murray, and others. Books on the subject are Martin's *Late Voyage to St Kilda*, 1698, and his *Description of the Western Islands of Scotland*, 1703; Buchan's *Description of St Kilda*, 1741 and 1773; Rev. Kenneth Macaulay's *Voyage to and History of St Kilda*, 1764; Rev. John Lane Buchanan's *Travels in the Western Hebrides*, 1793; Dr John Macculloch's *Description of the Western Islands of Scotland*, 1819, and his *Highlands and Western Islands*, 4 vols., 1824; L. MacLean's *Sketches of the Island of St Kilda*, 1838; J. Sands' *Out of the World; or, Life in St Kilda*, 1876 and 1877; MacDiarmid's 'St Kilda and its Inhabitants' in *Trans. Highl. and Ag. Soc.*, 1878; and finally Geo. Seton's *St Kilda, Past and Present*, 1878, to which we are indebted for much of the preceding article. Besides these a large number of magazine articles, etc., on the subject are detailed in Poole's *Index to Periodical Literature*.

St Leonards, the seat of Thomas Nelson, Esq., publisher, in the SE vicinity of Edinburgh, near the south-western base of Arthur's Seat, and 1½ mile SSE of the General Post Office. Surrounded by grounds 12 acres in extent, it is a lofty Scottish Baronial edifice, erected in 1869-70 from designs by Mr John Lessels.

St Leonards, a small parish in the E of Fife, and forming practically part of the parish of St Andrews, though it is civilly and ecclesiastically distinct. It consists of a main portion near the centre of the S border of St Andrews parish and several detached portions in and about the town. The main part, which lies to the S of Boarhills, is bounded W and N by the parish of St Andrews, E by the parish of Kingsbarns, S by the parish of Crail, and SW by the parish of Dunino; its extreme length and breadth are 1⅝ mile. The physical characteristics are the same as in St Andrews, and the height above sea-level rises towards the S till 317 feet is reached near the corner of Balcaithly Wood. The drainage is carried off by Kenly Burn, which has, along the boundary or through this part of the parish, a course of fully 1¼ mile. Another portion immediately SW of the town of St Andrews measures 4 by 2 furlongs, and there are smaller sections at the E end of the town. The land area is 820 acres; and the whole parish, which was originally the property of the Priory of St Andrews and afterwards of St Leonard's College, now belongs to the United College of St Salvator and St Leonard at St Andrews. Although the principal of St Leonard's did not always officiate as the minister of the parish, and in the case of George Buchanan (1566-70) was not even a clergyman, it is certain that for some time before the

Revolution the two offices were held by the same person; and from that time till 1836, first the principal of St Leonard's, and thereafter of the United College, was always a clergyman and minister of this parish. St Leonards is in the presbytery of St Andrews and the synod of Fife, and the living is worth £315 a year. The chapel of St Salvator's College has been used as the parish church for more than a century, and was legally annexed to the parish in 1843. Valuation (1856) £859, 7s., (1875) £1660, 16s. 3d., (1885) £1377, 10s. 11d. Pop. (1801) 363, (1831) 482, (1861) 513, (1871) 741, (1881) 769, of whom 436 were females.—*Ord. Sur.*, shs. 49, 41, 1865-57.

St Madoes, a small parish at the W end of the Carse of Gowrie, Perthshire, adjoining, at its north-western boundary, GLENCARSE station on the Caledonian railway, 15½ miles WSW of Dundee and 6 E by S of the post-town, Perth. It is bounded NW by Kinfauns, NE by Errol, S by the Firth of Tay, and W by the Inchyra section of Kinnoull. Its utmost length, from N to S, is 1⅝ mile; its utmost breadth, from E to W, is 1⅝ mile; and its area is 1417½ acres, of which 153½ are foreshore and 104½ water. The Firth of Tay, which curves along the southern border for 1⅝ mile, broadens eastward from ¼ to 1 mile, but at its widest is divided by Mugdrum island into the North and the South Deep. The shore is fringed by three old sea-margins, 3, 9, and 14 feet above the level of the Tay; and, beyond, the surface rises gently to a maximum altitude of 71 feet near Dumgreen. Old Red Sandstone is the predominant rock, and has been quarried at Cottown. The soil, a deep strong clay near the Tay, on the higher grounds is a rich brown loam. Excepting about 30 acres of plantation, 76 of permanent pasture, and 68 in the policy of Pitfour Castle, the entire area is constantly in tillage. A large brickwork employs about 60 people. Near the eastern boundary is the 'Hawk's Stane' referred to under LUNCARTY; in the Pitfour policy are remains of a stone circle, with cup-markings; and in the churchyard is an elaborately sculptured stone, 7 feet long, and 3 to 2½ feet broad. Alexander Lindsay, Bishop of Dunkeld, was minister from 1591 till his death in 1639. PITFOUR CASTLE, noticed separately, is the only mansion; and Sir J. T. Stewart-Richardson, Bart., is almost the sole proprietor. St Madoes is in the presbytery of Perth and the synod of Perth and Stirling; the living is worth £247, with a manse and a glebe of £80 value per annum. The parish church, near Glencarse station, was built in 1798, and contains 410 sittings. The public school, with accommodation for 114 children, had (1884) an average attendance of 85, and a grant of £74, 1s. 10d. Valuation (1860) £3980, 8s. 10d., (1885) £5297, 13s. 10d. Pop. (1801) 295, (1831) 327, (1861) 280, (1871) 290, (1881) 316.—*Ord. Sur.*, sh. 48, 1868.

St Magnus Bay, a spacious bay on the W coast of the mainland of Shetland. It measures 12⅝ miles across the entrance, expands to 14 miles, and indents the land to a depth of 13⅝ miles. It enters between the headlands of Esha Ness on the N and the Ness of Melby on the S; but has in its mouth, 1 mile from the latter, the island of Papa-Stour; so that it is reduced at the entrance to an open channel only 9¼ miles broad. Around its inner verge are the islets of Vemantry, Meikle Roe, Papa Little, and Linga, besides various holms and skerries; and projecting from it into the land are various bays or voes, which contain safe and excellent anchorage for any number of vessels of any burthen—particularly Ura Firth, Olna Firth Voe, Gon Firth, and Aith Voe.

St Margaret's Hope, a harbour and a post-office village in the island of South Ronaldshay, Orkney. The harbour is a small bay, projecting into the middle of the N coast of the island, and opening into the sound which separates South Ronaldshay from Burray. It is one of the safest and best harbours for small vessels in the kingdom. A fishery here, which drew regular visits from London lobster smacks, and engaged the capital of different English companies, was, for many years, the only regular fishery in Orkney. The village, standing at the head of the harbour, 13 miles S of Kirkwall, is the seat of an industrious population, chiefly engaged in fisheries. It has a post office under Kirkwall, with money order, savings' bank, and telegraph departments, a branch of the Union Bank, and a good inn. Pop. (1861) 260, (1871) 363, (1881) 412.

St Martins, a parish in the Strathmore district of Perthshire, containing Guildtown village, 6 miles N by E of Perth, under which it has a post office. Since the close of the 17th century it has comprised the ancient parish of Cambusmichael; and it is bounded N by Cargill, NE by Collace and the Bandirran section of Kettins in Forfarshire (detached), SE by Kilspindie and the Balbeggie section of Kinnoull, S by Scone, W by Redgorton, and NW by Auchtergaven. Its utmost length, from W by N to E by S, is 5¾ miles; its utmost breadth is 3⅝ miles; and its area is 6565 acres. The TAY, here a splendid salmon river, curves 2¾ miles south-south-westward along all the Auchtergaven and Redgorton boundary, and past the village of Stanley. Beside it the surface declines to less than 200 feet above sea-level; and thence it rises to 239 feet near Guildtown, 453 near Newlands, 413 near Cairnbeddie, 397 near Rosemount, and 424 near East Melginch. Thus, although neither flat nor hilly, it rises considerably above the Tay, and is much diversified by depressions and rising grounds. Plantations are extensive enough to give a warm appearance to the interior; and copsewoods fringe the margin of the river. The soil in general is a black mould, incumbent on till, and much improved by art; whilst towards the river it is naturally good and fertile. Freestone abounds, and has been largely quarried. Limestone and rock-marl also occur. One still may trace a Roman road leading north-north-eastward from the ancient Bertha towards the parish of Cargill. There are vestiges of several stone-circles; and one most interesting antiquity has been noticed in our article CAIRNBEDDIE. The church of St Martins anciently lay within the diocese of Dunkeld, and was a mensal church of the abbey of Holyrood. The church of Cambusmichael—still indicated by its ruins beside the Tay, on a low plain of the class which Gaelic calls *cambus*—was included in the diocese of St Andrews, and belonged to the abbacy of Scone. The principal mansion, St Martins Abbey, 5 miles NNE of Perth, is the seat of the chief proprietor, William Macdonald Macdonald, Esq. (b. 1822; suc. his cousin, 1841), the only son of Gen. Farquharson, who holds 22,600 acres in Perthshire and 2801 in Forfarshire, valued at £9192 and £5617 per annum, and who claims the chieftainship of the Colquhouns. The estate, originally called the Kirklands, was purchased by Wm. Macdonald, W.S., of Ranachan (1732-1814), a founder of the Highland and Agricultural Society; and by him the mansion was erected towards the close of last century. A massive and commodious building, it has been greatly enlarged and adorned by the present proprietor; and its beautiful grounds and policies were planned and laid out about 1858 by Mr Craiggie-Halket, the celebrated landscape gardener. In Sept. 1884 Mr Gladstone visited Sir Andrew Clark, Bart., M.D., at St Martins Abbey. (See chap. xlii. of T. Hunter's *Woods and Estates of Perthshire*, Perth, 1883.) St Martins is in the presbytery of Perth and the synod of Perth and Stirling; the living is worth £259. The parish church is a handsome and commodious edifice of 1842. Guildtown public school, with accommodation for 125 children, had (1884) an average attendance of 62, and a grant of £42, 18s. 7d. Valuation (1860) £7296, 5s. 3d., (1885) £8754, 13s. 5d. Pop. (1801) 1136, (1831) 1135, (1861) 904, (1871) 735, (1881) 741.—*Ord. Sur.*, sh. 48, 1868.

St Mary's. See RONALDSHAY, SOUTH.

St Mary's Holm, a place on the S coast of Holm parish, Orkney, 7 miles S by E of Kirkwall, under which it has a post office, with money order, savings' bank, and telegraph departments.

St Mary's Isle, the seat of the Earl of Selkirk, in Kirkcudbright parish, Kirkcudbrightshire, 1¼ mile SSW of the town, from which it is approached by a long lime-

tree avenue. It stands on a finely-wooded peninsula, projecting 1⅛ mile south-south-westward into the head of Kirkcudbright Bay, and 1 to 3 furlongs broad. The retreat of the sea, so noticeable along the whole coast of Kirkcudbrightshire, is peculiarly observable in this peninsula. The sea, in former times, made the place literally an isle, and covered at every tide at least one-half of its present cultivated surface. The W side is high ground, defended by a border of rocks; but the E side visibly discloses from end to end, in large shell-banks, the former line of high water. The house, a rambling, old-fashioned building, with grounds of singular beauty, occupies the site of a priory, founded about 1129 by Fergus, Lord of Galloway. The original name of the island was Trahil or Trayl, and the priory was dedicated to the Virgin Mary, whence we find it designated 'Prioratus Sanctæ Mariæ de Trayl.' It was the seat of canons-regular of the order of St Augustine, and, being given by its founder to the abbey of Holyrood, became a dependent cell of that establishment. The prior was a lord of parliament. The priory was surrounded with high walls, which enclosed an extensive area. The outer gate was distant at least ½ mile from the priory, and stood at a place still called the Great Cross. The inner gate led immediately to a group of cells, the habitations of the monks, and was called the Little Cross. All the buildings were swept away towards the close of the 17th century, to give full scope for beautifying the ground as a noble demesne. A hundred years since, while the Earl of Selkirk was extending his garden, 14 human skeletons were discovered by the workmen, placed regularly alongside of one another with their feet to the E, occupying a spot quite different from the burying-ground of the monks, and all the remains possibly of persons interred previous to the existence of the priory. David Panther, or Paniter, was prior of St Mary's Isle, and afterwards commendator of CAMBUSKENNETH. He was one of the most eminent literary men of his day, and wrote letters, published by Ruddiman in 1772, which afford a model of classical latinity. According, however, to Buchanan, he was a profane man, and instigated persons at court to all manner of impurities; whilst Knox says that 'eating and drinking was the pastyme of his lyif.' He died at Stirling on 1 Oct. 1558. Robert Richardson, descended from a line of respectable citizens of Edinburgh, and previously promoted to the offices of lord-treasurer and general of the mint, was made commendator of St Mary's Isle in 1558; and he was so adroit as to hold all his lucrative situations under both Mary and her son. Large estates were purchased by him; and at his death, in 1571, were left to his two sons, Sir James Richardson of Smeaton, and Sir Robert Richardson of Pencaitland. On 22 April 1778 the famous Paul Jones made a descent on St Mary's Isle, with the view of seizing the Earl of Selkirk as a hostage during the war with America. His lordship being from home, all the silver plate in his mansion was seized and carried away; but it was returned uninjured and without cost seven years after the depredation. Lord William Douglas (1634-94), eldest son, by a second marriage, of the first Marquess of DOUGLAS, was created Earl of Selkirk in 1646. He married Anne, Duchess of HAMILTON, and in 1660 obtained the title of third Duke of Hamilton, at the same time resigning the earldom of Selkirk, which, however, by a new patent of 1688 was conferred on his second son. Dunbar James Douglas, present and sixth Earl (b. 1809; suc. 1820), holds 20,283 acres in Kirkcudbrightshire, valued at £19,770 per annum.—*Ord. Sur.*, sh. 5, 1857.

St Mary's Loch, a beautiful lake on the mutual border of Selkirk and Peebles shires, 15½ miles WSW of Selkirk, 14 SSW of Innerleithen, and 15½ NE of Moffat. Lying 814 feet above sea-level, and 80 to 90 feet deep, it extends 3 miles north-by-eastward and north-eastward, and has a maximum breadth of exactly ½ mile. At its head is the smaller Loch of the LOWES; MEGGET Water and KIRKSTEAD Burn are the chief of eight streams that enter it; and YARROW Water issues from its foot. On either side the smooth green hills rise steeply—to the SE, BOWERHOPE Law (1570 feet), the Wiss (1932), and Peat Law (1737); to the NW, Watch Hill (1710), Bridgend Hill (1594), Copper Law (1690), Henderland Hill (1740), and DEER LAW (2065). Its waters are well stocked with trout, of ½ lb. each on an average; and pike and perch are also taken, with an occasional salmon and bull-trout. Scott, in his introduction to canto second of *Marmion*, has drawn a perfect picture of the scenery:—

> 'Oft in my mind such thoughts awake
> By lone St Mary's silent lake.
> Thou know'st it well,—nor fen, nor sedge,
> Pollute the pure lake's crystal edge;
> Abrupt and sheer, the mountains sink
> At once upon the level brink;
> And just a trace of silver sand
> Marks where the water meets the land.
> Far in the mirror, bright and blue,
> Each hill's huge outline you may view,
> Shaggy with heath, but lonely, bare,
> Nor tree, nor bush, nor brake is there,
> Save where, of land, yon slender line
> Bears thwart the lake the scattered pine.
> Nor thicket, dell, nor copse you spy
> Where living thing concealed might lie;
> Nor point, retiring, hides a dell,
> Where swain, or woodman lone, might dwell;
> There's nothing left to Fancy's guess,—
> You see that all is loneliness:
> And silence aids,—though the steep hills
> Send to the lake a thousand rills;
> In summer-tide so soft they weep,
> The sound but lulls the ear asleep;
> Your horse's hoof-tread sounds too rude—
> So stilly is the solitude.'

Yet, as in Wordsworth's day—

> 'The swan on still St Mary's Lake
> Float double, swan and shadow;'

and yet, like Wordsworth, we may fancy that—

> 'Throughout her depths, St Mary's Lake
> Is visibly delighted;
> For not a feature of those hills
> Is in the mirror slighted.'

The road from Peebles and Innerleithen to St Mary's Loch passes through a wild mountain defile, which opens on the vale of the Yarrow about 3 miles from the lake. On emerging from this, the lonely Yarrow bursts all at once on the traveller's view; and he looks on the mountains dotted with sheep, and ALTRIVE, the cottage of Hogg, the Ettrick shepherd, which stands a little way E of the lake, and which, more than any other feature in the landscape, makes St Mary's Loch an object of interest to lovers of poetry. Almost every mountain and stream in 'fair Ettrick Forest' have been hallowed by the genius of the bard, who

> 'Found in youth a harp among the hills,
> Dropt by the Elfin-people; and whilst the moon
> Entranced hung o'er still St Mary's Loch,
> Harp'd by that charmed water, so that the swan
> Came floating onwards through the water-blue,—
> A dream-like creature listening to a dream;
> And the Queen of the Fairies rising silently
> Through the pure mist, stood at the shepherd's feet,
> And half-forgot her own green paradise,
> Far in the bosom of the hill,—so wild!
> So sweet! so sad! flowed forth that shepherd's lay.'

'My beloved Shepherd,' said Christopher North in 1824, 'some half century hence your effigy will be seen on some bonny green knowe in the forest, with its honest face looking across St Mary's Loch, and up towards the Grey Mare's Tail; while by moonlight all your own fairies will weave a dance round its pedestal.' And his prediction has been almost exactly verified by the erection in 1860 of a monument on a grassy esplanade at the head of the loch. It consists of a square pedestal and a statue, 9½ and 8½ feet high, of Denholm freestone, by Andrew Currie, F.S.A., himself a native of 'the Forest.' The Shepherd, with plaid around him, is seated on an oak-root; at his feet lies Hector, his favourite dog; his right hand rests on a staff; and his left holds a scroll inscribed with the last line of the *Queen's Wake*—

> 'He taught the wandering winds to sing.'

Opposite, on the wooded patch of holm between the

lochs, 19 miles WSW of Selkirk, is St Margaret's Cottage or 'Tibbie Sheils,' long kept by Mrs Richardson (1781-1878), and the scene of one of the *Noctes*. The Rodono Hotel has been noticed separately, as also are Binram's Cross, Blackhouse, Chapelhope, Coppercleuch, Douglas Burn, Dryhope, Henderland, and Mount Benger. On the NW shore of the loch, 7 furlongs from its head, is the site of St Mary's kirk, with its ancient graveyard. This, too, the poet's pen has rendered a classic spot. In this lonely place the bones of many an outlaw mingle with the dust; and here the shepherd of the present century still finds his last resting-place.

> 'For though in feudal strife a foe
> Hath laid our Lady's chapel low,
> Yet still beneath the hallowed soil,
> The peasant rests him from his toil:
> And, dying, bids his bones be laid
> Where erst his simple fathers prayed.'

This ancient chapel is the subject of many traditions, and of numerous ballads and poems of ancient and modern date.

> 'St Mary's Loch lies shimmering still,
> But St Mary's kirk-bell's lang dune ringing!
> There's naething now but the grave-stane hill
> To tell o' a' their loud psalm-singing!'

Among the ballads, that of *The Douglas Tragedy* has been rendered widely familiar by the *Border Minstrelsy*. Another ancient and very popular tradition furnished the ground-work of Hogg's ballad of *Mess John;* and the chapel is the scene of the principal incident in his ballad of *Mary Scott*. Here the daughter of stern Tushilaw is supposed, by the poet, to have been brought to be buried; here she awoke from that sleep which seemed to all the sleep that knows no waking; and here she was married to her lover, Pringle, Lord of Torwoodlee.—*Ord. Sur.*, sh. 16, 1864.

St Mary's Tower, the Scottish seat of the Right Hon. Lord John Manners, in Little Dunkeld parish, Perthshire, near the right bank of the Tay, a little way E of Birnam. It is a large and stately Scottish Baronial edifice, of modern erection, with very beautiful grounds. —*Ord. Sur.*, sh. 48, 1868.

St Monance. See Abercrombie.

St Mungo, a parish of Annandale, Dumfriesshire, whose church stands near the right bank of the Water of Milk, 3 miles S by E of the post-town, Lockerbie. It is bounded NE by Tundergarth, E by Hoddam, S by Cummertrees, SW by Dalton, and W, NW, and N by Dryfesdale. Its utmost length, from N by E to S by W, is 5¼ miles; its breadth varies between ¼ mile and 3⅜ miles; and its area is 4932½ acres, of which 35⅝ are water. The river Annan winds 3⅝ miles south-eastward along all the Dalton and Cummertrees boundary; and the Water of Milk 6 miles south-by-westward — mainly through the interior, but for the first 1⅝ mile along the boundary with Tundergarth, and for the last 5⅝ furlongs along or near to that with Hoddam—until it falls into the Annan at the SE corner of the parish. Springs of the purest water, welling up from the rocks, and maintaining, in some cases, an equable temperature all the year round, are both many and copious. The general surface is slightly uneven, sinking little below 130, and little exceeding 300, feet above sea-level; but in a wing of the parish to the E of the Caledonian railway it attains near Cowdens a maximum altitude of 603 feet. Seen from distant heights which command a maplike view of it, the parish looks almost flat; but, though not strictly hilly, it has such swells and eminences as, with aid of Brunswark Hill in the neighbouring parish of Hoddam, and the wooded rising grounds of Kirkwood in Dalton, present on nearer inspection a gracefully, varied, and pleasing landscape. Silurian and Devonian rocks predominate; limestone has been quarried on the north-eastern border; sandstone and shale, belonging to the Carboniferous formation, are at the head of the glebe; porphyritic amygdaloid forms the main mass of Nutholm Hill; and galena, jasper, and chalcedony are found in various parts. The soil on about 280 acres of holm-land adjacent to the Annan and the Milk is a rich, deep alluvium, and elsewhere varies considerably. Nearly nine-tenths of the entire area are in tillage; and some 300 acres are under wood. A sepulchral tumulus was removed half a century since from Sorrysikemuir; an ancient Caledonian camp was formerly near the site of that tumulus; and on Cowdens farm is the spot where Ralph Erskine's tent was pitched at the introduction of Secession principles to Annandale. Mansions, noticed separately, are Castlemilk and Murrayfield; and R. Jardine, Esq., M.P., is chief proprietor, 1 other holding an annual value of more than £500, and 8 of between £100 and £500. St Mungo is in the presbytery of Lochmaben and the synod of Dumfries; the living is worth £310, 5s. 5d. The original parish church, which was dedicated to St Mungo or Kentigern, stood on the left bank of the river Annan, 1½ mile SW of the present one, and was a cruciform First Pointed edifice, partly rebuilt in 1754 and 1805. This church was confirmed by Robert de Bruce in 1174 to the episcopate of Glasgow, and became a mensal church of that see till the Reformation. The bishops of Glasgow are conjectured—chiefly from some remains visible at the end of last century of an ancient village, and of an extensive garden with a fish-pond—to have had a residence here. In 1116 the parish bore the name of Abermilk ('confluence of the Milk')—a name exchanged for Castlemilk by 1170, and afterwards for St Mungo. For a short period succeeding 1609 the parish was annexed to Tundergarth. The present church, on a picturesque site 200 yards to the SE of its predecessor of 1842, is a handsome edifice erected in 1875-77 at a cost of £5000, the whole defrayed by Mr Jardine of Castlemilk. Scottish Gothic in style, from designs by the late David Bryce, R.S.A., it is built of light grey freestone, and has 350 sittings, stained-glass windows, and a massive NE tower, 19 feet square and 70 high. The public school, with accommodation for 115 children, had (1884) an average attendance of 114, and a grant of £109. Valuation (1860) £4699, (1885) £6529, 7s. 4d. Pop. (1801) 644, (1831) 791, (1861) 686, (1871) 658, (1881) 653.—*Ord. Sur.*, sh. 10, 1864.

St Ninians or **St Ringans**, a large parish containing a post-town of the same name in the NE of the county of Stirling. It is bounded N by Perthshire, by portions of the parishes of Lecropt and Logie in Stirlingshire, by the parish of Stirling, and by Clackmannanshire, E by the parish of Airth, S by the parishes of Dunipace, Denny, and Kilsyth, W by the parish of Fintray, and WNW by the parish of Gargunnock. There is a small detached portion NE of the town of Stirling in the loop of the river Forth N and S of Queenshaugh. The boundary is largely natural. From the NW corner the line follows the N side of the Forth from the mouth of the West Carse Burn downwards to the junction with the Teith, and then the middle of the river downwards to the mouth of East Mains Burn, except for 1¼ mile N of the town of Stirling, where the parish of Stirling comes in, the whole distance traced by the Forth being 19½ miles following the windings of the river. On the E the line largely follows the courses of the East Mains, Darnbog, and Tor Burns; on the S those of Tor Burn and the river Carron, which forms the boundary for 6½ miles; and on the W those of Endrick Water and Burnfoot Burn. The greatest length of the parish, from the junction of the Darnbog and Tor Burns to form the Pow Burn on the E, to the junction of Burnfoot Burn with Endrick Water on the W, is 12¾ miles; the greatest breadth, from the junction of the rivers Forth and Teith on the N, to the junction of Buckie Burn with the river Carron on the S, is 7 miles; and the land area is 38,012 acres. The height above sea-level rises from 26 feet near the Forth in the NE corner and 35 near the Forth at the NW corner, towards the S and W borders. The central portion of the parish is on an average from 200 to 300 feet high; and at Gillies Hill the height is 500 feet, at Great Hill W of Sauchie House 831, above Barr Wood SW of Auchenbowie

House 503. The highest ground forming the eastern extremity of the Lennox Hills is, in the W and SW, at Scout Head (705 feet), Earl's Hill (1443), Hart Hill (1428), Cringate Law (1300)—including the moorlands of Touch Muir, Touchadam Muir, The Fell, and Cringate Muir—Cairnoch Hill (1354), Craigannet Hill (1171), Craigengelt Hill (1000), and Dundaff Hill (1157). The ground is divided into what is locally known as carse, dryfield, and moorland. The first—which occupies the southern and eastern districts—was, before the march of modern agricultural improvement began, a flat stretch of morass, but is now highly cultivated, and produces heavy crops. The part of it along the edge of the Forth has to be protected by strong embankments against the overflow of the river during floods. The dryfield—the most extensive of the three—is the higher ground behind the carse, with an undulating surface sloping chiefly to the N and E. It is highly cultivated, and has numerous hedgerows and plantations. The moorland, lying in the W and SW among the heights already mentioned, comprises about ¼ of the whole area. The northern part is heathy, but the southern abounds in excellent pasture, and there is some good and well-cultivated haughland along the river Carron. The soil of the carse is an alluvium 8 to 20 feet deep, and below this lie successively layers of moss, drift, and sand. The whole of it has been, within a comparatively recent period — certainly subsequent to the appearance of man—beneath the level of the sea, but there must have been a land surface previous to the formation of the upper alluvial deposits, as the layer of moss beneath these contains bark and branches of hazel. At the time of the battle of Bannockburn the carse seems to have been an impassable morass. The underlying rocks are carboniferous, those to the E belonging to the Coal-measures, those in the centre to the Carboniferous Limestone series, while on the W throughout the moorland district are interbedded basalts. There are collieries at Auchenbowie, Bannockburn, Cowie, Greenyards, and Plean, and the other beds are quarried at different places. The drainage of a small portion of the parish in the extreme W goes to the great Clyde basin, being carried off by Endrick Water and Burnfoot Burn and the smaller streams flowing to it: the surplus rainfall elsewhere goes to the Forth. Along the N it is carried off by the river Forth itself, which receives in the NW corner the Baston and Touch Burns—the latter receiving the Craigbrock Burn—and elsewhere along the N a number of smaller streams. Flowing through the centre and NE of the parish is the Bannock Burn, which, rising at Earl's Hill, has a course of 14 miles north-eastward to the Forth, receiving near the middle of its length Sauchie Burn. Besides the streams already mentioned on the E and S borders, there are also in the SE Small Burn, uniting with some other streams to form Sauchinford Burn flowing to Tor Burn, and Plean Burn also flowing to Tor Burn; in the centre of the S side Auchenbowie Burn, which passes through the parish of Dunipace to the Carron; and in the SW Buckie Burn and Earl's Burn, both flowing to the Carron. On Touch Burn is a waterfall called Gilmour's Linn, and on the river Carron another called Auchentillin's Spout. Neither are of any great height. The only lake is Loch Coulter near the middle of the S side, which is separately noticed.

There are a number of tumuli, and at that at Ghosts' Knowe, on the Buckie Burn, near the centre of the S side of the parish, a sepulchral chamber was opened in 1839, but the valuable find of implements, etc., was scattered by the ignorant workmen employed. The Roman road from Camelon northwards entered the parish about ¾ mile W of Carbrook House (Dunipace), and ran in a straight line north-westward to Snabhead, SW of Bannockburn House, where it turned NNW and ran parallel to the modern road through the town of St Ninians to Stirling and to the W of it. A few traces of it are still to be seen, as well as of some of the stations. The old pronunciation and often the spelling of the name was St Ringans, which is still in common local use, though it is now beginning to be superseded by St Ninians, which has been the spelling since the end of last century. There must have been a church here from a very early date, and the dedication was to St Ninian, who flourished in the end of the 4th and the beginning of the 5th centuries, and who converted the southern Picts to Christianity. (See Whithorn.) This church was probably near the well called St Ninian's Well, on the S side of Stirling. In the reign of David I. Robert, Bishop of St Andrews (1126-58), granted to the newly founded Cambuskenneth Abbey 'the church of Egglis St Ninians, with its chapels of Dunipace and Lithbert, and all its other chapels and oratories, and all other pertinents;' but whether this church was on the site of the early one or occupied the same position as the present church cannot now be determined. Another church at Kirk-o'-muir, 7½ miles SW of the present parish church, is said to have been one of the earliest churches in Scotland where the sacrament of the Lord's Supper was dispensed by the Reformers in Scotland. It figures in the Commissary's list as the church of a distinct parish apart from St Ninians, but no traces of the building are now to be seen, though the churchyard remains. There was also a chapel at Cambusbarron, and another dedicated to the Virgin Mary at Skeoch, ½ mile NE of Bannockburn. In the extreme SW of the parish are the ruins of a castle, once the stronghold of Sir John Graham, the companion of Wallace; and near it are the lands of Dundaff, from which the Duke of Montrose, who is sprung from an elder branch of the same family of Graham, takes his title of Viscount of Dundaff. There are also ruins of old castles at Sauchie and Carnock, which are separately noticed. Traversed by the great main road from Edinburgh to Stirling and the north, the parish has been the scene of many of the events connected with the national history of Scotland. To the SW of the town of St Ninians is the Bore-stone marking the place where Bruce's standard was planted during the battle of Bannockburn. The battle itself is separately noticed, as are also the battles of Sauchieburn and Stirling Bridge, the latter under Stirling. The town of St Ninians was the limit of the pursuit of the surprise party from Edinburgh which in 1571 attacked Stirling and attempted to carry off the Regent Lennox, who was slain in the skirmish that followed. The exact spot where the Regent fell was formerly pointed out at Newhouse between Stirling and the town of St Ninians; but, considering the whole circumstances, the place where he received his mortal wound was probably nearer Stirling. A heap of stones raised to mark the spot was removed when the road was widened in 1758. In 1745 Prince Charles Edward Stewart, on his march to the south, spent a night at Bannockburn House; and in January 1746, when on his return to the north, he made that house his headquarters. While lodging there he was shot at, and the mark made by the bullet is still shown in one of the rooms. On the morning of the 17th January he drew up his army on Plean Moor preparatory to their march to the battlefield of Falkirk; and on the 1st of February, just as the retreat northward was begun before the approaching forces of the Duke of Cumberland, the parish church, which had been used by the Highland army as a powder magazine, was blown up, whether purposely or accidentally is not known. The steeple remained entire, and, as the new church was built at some distance from it the tower still stands a lonely witness to the rebellion of 1745. The parishioners here suffered so much from a case of intrusion in 1734, and from another in 1773, that they adopted towards the end of the century a very effective method of dealing with the patronage question by buying up the rights of the patron in 1788 at a cost of between £600 and £700, which they raised by voluntary contributions among themselves. In the immediate neighbourhood of Plean *quoad sacra* church is an asylum founded and endowed by the late Francis Simpson, Esq. of East Plean, for the residence and support of indigent old men, preference being given to those who have served

in the army or navy. It has usually about 30 inmates. Distinguished natives of the parish are Dr Henry, the historian (1718-90), who was born at Muirton; Sir George Harvey, P.R.S.A. (1805-76); and Dr Robert Buchanan, Free Church leader (1802-75); and Miss Hamilton (1758-1816), author of the *Cottagers of Glenburnie*, resided at Crook while composing that work. The parish is traversed by main roads from Stirling to Airth, Edinburgh by Falkirk, Denny, Glasgow, and Balfron; and there are also a large number of good district roads. A reach of the Scottish Central railway (North British and Caledonian jointly) from Edinburgh and Glasgow, which passes across the SE and centre for 5¼ miles, has a station at Bannockburn, 33½ miles NW of Edinburgh, 27 NE of Glasgow, and 2½ SSE of Stirling; and access is also readily obtained from Stirling station. In the E end of the parish the South Alloa (Caledonian) branch of the Scottish Central has a course of 2½ miles before it passes into Airth parish close to Dunmore pottery. A reach of the Forth and Clyde railway passes for 5 miles along the northern border from Stirling westward. The industries other than farming are noticed in connection with the villages. An important annual market for cattle and horses is held at Bannockburn on the third Tuesday of June. The principal mansions, most of which are separately noticed, are Auchenbowie House, Bannockburn House, Carnock House, Craigforth, Gartur, Laurelhill, Easter and Wester Livilands, Plean House, Polmaise, Sauchie House, Seton Lodge, and Touch House.

St Ninians is in the presbytery of Stirling and synod of Perth and Stirling, and the living is worth £400 a year. The parish church at the town was built in 1750, and contains 1500 sittings; and there are *quoad sacra* churches at Bannockburn and Plean, the former dating from 1838 and the latter from 1839. There are also Free and U.P. churches at Bannockburn and the town of St Ninians, and a Free church at Cambusbarron. The first Relief congregation, that at the town, was formed after the forcible induction of a parish minister in 1773, and that at Bannockburn in 1797. Under the school board are Bannockburn, Cambusbarron, East Plean, Fallin, Milton, Muirland, and West Plean public schools, which, with accommodation for 270, 270, 150, 60, 150, 40, and 100 pupils respectively, had in 1884 attendances of 203, 145, 112, 20, 91, 20, and 52, and grants of £187, 17s. 6d., £122, 7s., £100, 3s., £32, 11s., £73, 2s. 11d., £35, 18s., and £35, 11s. At Bannockburn there is also the endowed Wilson Academy, founded and endowed in 1848 by Sir James Wilson, and further endowed by his sister in 1849 and 1859. It is proposed under the Educational Endowment Act to hand over the building to the school board along with one-third of the revenue, to devote about three-eighths of the revenue to the assistance of technical education in Stirling, and the rest of the income to the foundation of six bursaries to enable children of merit resident in the village of Bannockburn to attend Stirling High School. The principal proprietors are the Duke of Montrose, the Earl of Dunmore, Sir James R. Gibson-Maitland of Sauchie, and Colonel John Murray of Touchadam and Polmaise, and there are over 120 other proprietors, but some of their holdings are very small. Valuation (1860) £41,980, (1885) £55,167. Pop. of parish (1801) 6849, (1831) 9552, (1861) 8946, (1871) 10,146, (1881) 10,423, of whom 5141 were males and 5282 were females, while 6105 were in the ecclesiastical parish. Houses (1881) 2125 inhabited, 251 uninhabited, and 12 being built. The population of the landward portion of the parish in 1881 was 5029, of whom 2552 were males and 2477 females.—*Ord. Sur.*, shs. 39, 31, 1869-67.

Besides the post-town of the same name, the parish contains also the post-towns of Bannockburn and Cambusbarron and the villages or hamlets of Auchenbowie, Belfield, Chartershall, Muirton, Newhouse, Plean, Torbrex, and Whins of Melton, most of which are separately noticed. The Town of St Ninians stands in the N of the parish, close to the S side of Stirling. Up to 1724 it was simply the Kirkton, but has since then been known as St Ringans or St Ninians. Although nominally 1¼ mile S of Stirling, it is in reality a straggling appendage to that town, with which it is connected by the villages of Newhouse and Belfield, and within the parliamentary boundaries of which it is included. It consists mainly of one long narrow street along the great south road from Stirling, just to the N of the point where it forks into the roads leading to Glasgow and Edinburgh. The houses are curious and old-fashioned, and many of them bear rude sculpturings of dates, initials, and sometimes of the tools of the tradesmen to whom they originally belonged. St Ninians has a share in the woollen industries connected with Stirling, Bannockburn, and Cambusbarron, and has besides a manufacture of nails and screw-bolts of its own as well as tan-works of considerable size. Pop. of town (1861) 1334, (1881) 1647, of whom 788 were males and 859 females. Houses in the same year 371 occupied and 64 unoccupied.

St Quivox, a parish of Kyle, Ayrshire, containing Whitletts village and the Wallacetown suburb of Ayr. It is bounded N by Monkton, NE and E by Tarbolton, SE by Coylton, S by Ayr, and W by Newton-upon-Ayr and Monkton. Its utmost length, from ENE to WSW, is 4⅜ miles; its breadth varies between ⅜ mile and 2⅞ miles; and its area is 4930½ acres, of which 54½ are water. The beautiful river Ayr curves 5¼ miles west-south-westward along all the south-eastern and southern boundary, its banks in places being steep and wooded. The surface rises north-eastward to 228 feet above the sea at Brocklehill; but the southern and western districts are low and level, at no point much exceeding 60 feet. The rocks are carboniferous; and coal and excellent sandstone have both been worked. The soil is sandy in the W, in the centre is light and gravelly on an irretentive subsoil, and on the eastern border is a stiffish clay. Nearly 250 acres are under wood; and almost all the remainder is arable. Mansions, noticed separately, are Auchencruive and Craigie; and 3 proprietors hold each an annual value of £500 and upwards, 2 of between £100 and £500. Giving off since 1874 the *quoad sacra* parish of Wallacetown, St Quivox is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £394. The ancient parish church was originally, and for centuries, called Sanchar, the antique form of the modernised Sanquhar, from the Gaelic *sean*, 'old,' and *cathair* or *caer*, 'a fort.' In 1212 it was a rectory; between 1229 and 1238 it belonged to the short-lived Gilbertine convent, which the second Walter, the Stewart, established at Dalmulin; and from 1238 till the Reformation it belonged to the monks of Paisley. Though Sanchar continued to be the name of the several estates which were portions of the ancient territory or manor, the church, at the Reformation, appears under the designation of St Kevoc. This name is commonly supposed to be derived from Kevoca, a holy virgin of Kyle, who lived in the first half of the 11th century; but Bishop Forbes, in his *Kalendar of Scottish Saints* (1872), refers it to the Irish saint, Caemhan or Pulcherius, the affectionate form of whose name is *Mo-chaemhoc*, pronounced *Mo-keevoc*. The present parish church, near Auchencruive station, is of pre-Reformation date, and, as enlarged about 1825, contains nearly 500 sittings. Two public schools, St Quivox and Whitletts, with respective accommodation for 94 and 180 children, had (1884) an average attendance of 64 and 106, and grants of £49, 16s. and £71 11s. Valuation (1880) £11,416, 16s. 2d., (1885) £12,076, 9s. 8d., *plus* £2354 for railway. Pop. (1801) 2070, (1831) 5289, (1861) 7097, (1871) 6069, (1881) 7352, of whom 1429 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 14, 1863.

St Ringans. See St Ninians.

St Vigeans, a village and a coast parish of Forfarshire. The village, though small, is ancient; and is said to derive its name either from a hermit and confessor who died at Grange of Conon in the neighbourhood about the year 1012, or from the Irish ecclesiastic Fechin, abbot of Fobhar, who died in 664. It stands on the Brothock, 1¼ mile N of Arbroath.

The parish of St Vigeans, one of the oldest in the

country, consists of a main body and two detached portions. The main section, containing great part of the town of ARBROATH, is bounded N by Inverkeilor, E and SE by the North Sea, S by Arbroath and Arbirlot, and W and NW by Carmyllie. It measures 7⅝ miles from E to W; and varies in breadth between 1¾ and 4⅝ miles. The smaller of the detached portions lies ¼ mile SW of the main body, from which it is separated by the burgh roods of Arbroath. It is 5 furlongs long by 3 broad, and bears the name of Hospitalfield, from having been the site of the hospital of Arbroath Abbey. The other section is 1⅝ mile long by 1⅝ mile broad, and lies 3 miles SW of Arbroath. It bears the name of Inverpeffer, and before being purchased in the 17th century by the Panmure family, belonged to the Fletchers, afterwards of Salton. The area of the entire parish is 13,413·521 acres, of which 1055·744 belong to the detached portions, whilst 393·362 are foreshore and 19·337 water. Up till about 1560 the parish of St Vigeans included the entire town of Arbroath with its abbey, and was sometimes called Aberbrothock. From the boundary with Inverkeilor to within a mile of Arbroath, the coast of the parish is a range of almost perpendicular cliffs, with a maximum height of 157 feet. In nearly their whole extent their base is covered with water at full tide, so that for the most part access to the large and interesting caves, crevices, and arches which are numerous along the seaward face, is possible only at low water or by boat. The chief of these spacious and romantic caverns are the GAYLET POT, the Mason's Cave, and the Maiden Castle Cave. The cliffs figure in Sir Walter Scott's *Antiquary* as the scene of the dangerous adventure of Sir Arthur and Miss Wardour. The surface of the main portion of the parish is mainly occupied by three different declivities or ridges; while the streamlet Brothock, flowing SSE, divides it into two tolerably equal parts. The chief eminences are Dichmont Law (323 feet), about 1¼ mile from the coast, and Cairn Conan (597), in the W, 7½ miles from the sea, and commanding a beautiful and extensive view. Eruptive rock occurs in St Vigeans, but is not prominent; Old Red Sandstone is found tolerably general, and is extensively quarried at Whittingness, and has been a good deal used for building in Arbroath; and a softer variety, containing vegetable fossils, is quarried at Drumyellow and Brax. Diluvial ridges, consisting of boulders, gravel, sand, and clay strata, several of them 1 mile long, lie along the sides of the Brothock, and have a maximum altitude of about 40 feet. Several rocky heights of sandstone also occur near the lower course of the Brothock. One of them affords a convenient and conspicuous site for the parish church; and another very similar in appearance, 180 yards distant, is famous for an echo of four syllables. The soil varies in character throughout the parish, but is prevailingly fertile. In 1744, with the exception of garden ground, not more than 40 acres were enclosed within the parish. Now rather more than 800 acres are under wood, and nearly all the remainder is in tillage. The industries of the parish include, besides agriculture, a part of the textile industry in ARBROATH, with fishing at AUCHMITHIE, spinning in an extensive establishment at Inchmill, originally erected in 1808, and in smaller mills at Colliston and North Tarrey. The roads of the parish are good; and a section of the Arbroath and Forfar branch of the Scottish North-Eastern railway crosses it. Besides the village of the same name, St Vigeans parish includes the villages of AUCHMITHIE, COLLISTON, MARYWELL, and GOWANBANK, and part of the post-town of ARBROATH. The chief modern mansions are Letham, Seaton, Abbethune, Springfield, Parkhill, Newton, Millbank, Woodlands, Almerieclose, Beechwood, and Hospitalfield. The old mansion of Colliston is said to have been built by Cardinal Beatoun for his son-in-law.

St Vigeans itself is in the presbytery of Arbroath and the synod of Angus and Mearns; the living is worth £359. The parish is divided ecclesiastically into St Vigeans proper and the *quoad sacra* parishes of COLLISTON and INVERBROTHOCK, with parts of the *quoad sacra* parishes of LADYLOAN and ABBEY Arbroath. There is also a chapel of ease at Auchmithie. The parish church was originally erected not later than the beginning of the 11th century, but it was considerably enlarged before 1242, and repaired in 1485. Alterations or repairs took place during the 18th century, and some enlargements in 1822 and 1827, in course of which the church lost much of its original Saxon or Norman character. In 1872, however, it was restored at a cost of fully £3000, to a plain uniform 15th century Gothic style; and it now comprises a nave, aisles, pentagonal chancel, with a square tower and spire; while the interior is adorned with a carved oaken pulpit, an octagonal baptismal font, and beautiful stained-glass windows. It contains about 900 sittings. Both the ancient church and the surrounding burying-ground were noted for sculptured sepulchral stones; and several ancient crosses and finely executed mouldings have been found. A chapel, dedicated to St Ninian, formerly stood near the sea; and the adjacent St Ninian's Well was believed to possess great curative powers. Two public schools, Colliston and St Vigeans, with respective accommodation for 171 and 150 children, had (1884) an average attendance of 103 and 113, and government grants of £79, 8s. and £75, 15s. 6d. Valuation (1857) £16,691, (1885) £20,970, *plus* £5351 for railway. Pop. of civil parish (1801) 4243, (1831) 7135, (1861) 10,537, (1871) 12,805, (1881) 14,982, of whom 1821 were in the ecclesiastical parish. —*Ord. Sur.*, shs. 57, 49, 1868-65.

Salachie, Loch, or **Lochan t-Salachaidh.** See GOLSPIE.

Salen, a *quoad sacra* parish in the NE of Mull island, Argyllshire, on the Sound of Mull, containing AROS post office, an Established church (*circa* 1783), a Free church (1883), St Columba's Episcopal church (1874), and a new public school. Pop. (1871) 605, (1881) 600, of whom 387 were in Torosay parish and 213 in Kilninian and Kilmore.

Salen, a place in Ardnamurchan parish, Argyllshire, on the N shore of Loch Sunart, 10 miles WNW of Strontian. It has an inn and a post office, with money order, savings' bank, and telegraph departments.

Saline, a village and a parish of SW Fife. The village, standing 405 feet above sea-level, at the SW base of Saline Hill, is 2⅝ miles N by W of Oakley station, and 5½ NW of Dunfermline, under which it has a post office, with money order and savings' bank departments. It is a pleasant little place, clean and picturesque in appearance, the houses neatly built and whitewashed, and all with small gardens attached. Pop. (1871) 396, (1881) 369.

The parish is bounded N by Fossoway in Perthshire and Torryburn (detached), E by Dunfermline, SE by Carnock, SW by Culross in Perthshire (detached), and W by Clackmannan. Its utmost length, from E to W, is 5¾ miles; its utmost breadth, from N to S, is 3¼ miles; and the area is 8188¾ acres, of which 1154¾ belong to a detached portion lying 2½ furlongs S of the nearest point of the main body, surrounded by Carnock, Torryburn, and Culross, and containing OAKLEY station. The drainage is mainly carried west-south-westward towards the Forth by the Black DEVON; and in the extreme W the surface declines to 200 feet above sea-level, thence rising eastward to 340 feet near Stand Alane, 700 near Bandrum, 627 near Miry Hall, and 1178 at Saline Hill. Coal, limestone, and ironstone have been largely worked; and the soil of the low tracts is mostly a mixture of clay and loam incumbent on till, generally somewhat shallow, but in places extremely fertile. The uplands are chiefly pastoral, and partly marshy, yet include some good arable tracts. Peat moss abounds in the marshy parts, and affords excellent peat fuel. The antiquities are some cairns, two Roman camps, and two old towers; and mansions, noticed separately, are BALGONAR, BANDRUM, KINEDDER, and INZIEVAR, the last in the detached portion. Including ecclesiastically the detached portion of TORRYBURN, Saline is in the presbytery of Dunfermline and the synod of Fife; the living is worth £207. The

parish church occupies a conspicuous site, and is a handsome Gothic edifice. There is also a Free church; and the public school, with accommodation for 150 children, had (1884) an average attendance of 110, and a grant of £91, 16s. Valuation (1856) £11,156, 15s., (1885) £7936, 16s. 3d. Pop. of ecclesiastical parish (1881) 1038; of civil parish (1801) 945, (1831) 1139, (1861) 1610, (1871) 1259, (1881) 954—a decrease due to the stoppage of the Forth Ironworks.—*Ord. Sur.*, shs. 40, 39, 1869-67.

Salisbury Craigs. See ARTHUR'S SEAT and EDINBURGH.

Salloch. See GLENSALLOCH.

Salsburgh or **Salysburgh,** a village, with a post office, in Shotts parish, Lanarkshire, 3¼ miles NW of Shotts station, and 4½ ENE of Holytown. Pop. (1861) 325, (1871) 553, (1881) 576.

Saltburn, a village, with a public school, in Rosskeen parish, NE Ross-shire, on the shore of the Cromarty Firth, 1¼ mile NE of Invergordon.

Saltcoats, a watering-place of Cunninghame district, Ayrshire, in the parishes of Ardrossan and Stevenston. Lying about the middle of the northern side of the Bay of Ayr, 1¼ mile ESE of the town of Ardrossan, it has a station on a branch-line of the Glasgow and South-Western railway, 4 miles WSW of Kilwinning Junction, and 29½ SW of Glasgow. Its site is low level ground in the vicinity of sandy bluffs and flat expanses, but is relieved from dulness by the vicinity of a range of high ground to the N, and by the prospect, across the waters, of the splendid mountains of Arran. Great improvements have been effected in recent years; some of the churches, one or two other public buildings, and a handsome spire on the town-house (1825), have claims to architectural beauty; the near neighbourhood of Ardrossan also is not a little pleasant; and the accommodations of Saltcoats itself, together with the character of its sea-beach, are such as to draw to it many families for summer sea-bathing. Places of worship within it are Ardrossan parish church (1774), the North church, the Free church, the Gaelic Free church, the East and West U.P. churches, the Congregational church (1863), and the Roman Catholic church of Our Lady, Star of the Sea (1856). The last is a good Early English edifice, built at a cost of £2200. A new public school, French Gothic in style, with accommodation for 500 children, and with a bell-tower 60 feet high, was erected in 1876; and in 1882 a new Academy, for 280 pupils, was built midway between Ardrossan and Saltcoats. The town has a post office, with money order, savings' bank, insurance, and telegraph departments, branches of the Bank of Scotland and Royal Bank, agencies of 19 insurance companies, an hotel, sea-baths, a gas company, an admirable drainage system, a cemetery, a horticultural society, a mission coast home, etc. Saltcoats was made a burgh of barony by a charter of 1528; but it soon lost its burghal character, and almost sank into extinction. It was originally a collection of clay-built cots, inhabited by poor persons who manufactured salt in small pans and kettles; and it thence obtained the name of Saltcotes. But it possessed only a fitful prosperity; and, about the year 1660, it had dwindled away to only four houses. In 1686, however, Robert Cuninghame, whose uncle, Sir Robert, had purchased the barony of Stevenston in 1656, built several large saltpans at Saltcoats, placed the manufacture of salt on an entirely new and advantageous footing, constructed a harbour on a scale which the circumstances of the case rendered large and enterprising, and opened various coal-pits in the vicinity on a plan to render the new harbour a place of large export for coal. The decayed hamlet grew suddenly into a considerable village; and the village thenceforth enlarged into a small town. The salt manufacture, engaging seven large saltpans, continued to flourish till the repeal of the salt duty in 1827, and is not yet quite extinct. A magnesia work, started in connection with the saltpans in 1802, was the earliest establishment of its kind in Scotland. Ship-building has, at various periods, been vigorously conducted, but has been so fitful as alternately to rise into prominence and to sink into extinction. Rope-making, also, has been a fluctuating trade. The commerce of the port has ceased for a good many years, having been absorbed by ARDROSSAN. It consisted chiefly in the export of coals to Ireland, and was of such extent that the amount of local dues yielded by it was about £120 a year. The harbour is a creek of the port of Irvine. A fair for cattle, pigs, and hiring is held on the last Thursday of May; and a justice of peace court sits on the first Friday of every month. Pop. (1821) 3413, (1841) 4238, (1861) 4780, (1871) 4624, (1881) 5096 of whom 2760 were females, and 3329 were in Ardrossan parish. Houses (1881) 1169 inhabited, 121 vacant, 11 building. —*Ord. Sur.*, sh. 22, 1865.

Salthouse Head. See PETERHEAD.

Salton, a parish of W Haddingtonshire, whose church stands at East Salton village, in the centre of the parish, 6¼ miles SSW of Haddington, 5¾ SE of Tranent, and 2⅝ ESE of the post-town, Pencaitland. Containing also West Salton village (1 mile WSW), with a post office, it is bounded N by Gladsmuir, NE by Haddington, E and SE by Bolton, S and SW by Humbie, and W and NW by Pencaitland. Its utmost length, from N to S, is 3½ miles; its utmost width is 2¾ miles; and its area is 3811⅝ acres. The TYNE winds 2⅝ miles north-eastward along or near to all the north-western and northern boundary; and its affluent, Salton or Birns Water, over the last 3⅝ miles of its course, roughly traces all the southern, south-western, and western boundary. The surface has a general southward ascent—from a little below 200 feet at the northern border to a little over 500 at broad-based Skimmer Hill. On the SE and E this high ground is, in a certain degree, continued by low uplands; but on all other sides the surface falls gradually off to the boundaries, and becomes lost in levels of very humble altitude. A wood, which covers nearly 1 square mile, and is continuous with a forest of similar size in Humbie, occupies most of the hanging plain on the SW. The rocks are carboniferous; and limestone has been largely worked, whilst coal is believed to lie under the strata of limestone. The soil is very various, chiefly a deep rich clay, but also a clayey or friable loam and a light sand. Except the area under wood, and about 150 acres in permanent pasture, the entire parish is arable. Salton is noted for having been the first place in Scotland in which pot-barley was manufactured, and the first in Britain in which the weaving of hollands was established—both these industries having been introduced from the Netherlands by the lady of Henry Fletcher of Salton in or soon after 1710. It was also the first place in which a bleachfield of the British Linen Company was formed (in 1750), and one of the earliest in which a paper-mill and a starch-work were set up. It is further associated with the invention and improvement of some agricultural machines; but all its manufactures have long been things of the past. The parish is traversed by the road from Edinburgh, across the Lammermuirs, to Duns. In the 12th and the first half of the 13th century the manor of Salton belonged to the De Morvilles, lords high-constables of Scotland, and their successors the Lords of Galloway; but about 1260 the greater part of it seems to have been possessed by Sir William de Abernethy, whose descendant, Laurence, in 1445 was created Baron Saltoun (see PHILORTH). In 1643 the ninth Lord Saltoun sold the estate to Sir Andrew Fletcher, a judge-of-session, with the title of Lord Innerpeffer, among whose descendants have been Andrew Fletcher (1653-1716), the patriot and political writer, and Andrew Fletcher, Lord Milton (1692-1766), a distinguished judge. The present owner, John Fletcher, Esq. (b. 1827; suc. 1879), holds 3928 acres in the shire, valued at £6457 per annum. His seat, Salton Hall, on the right bank of Salton Water, 1⅛ mile WNW of East Salton, was formerly a fortified place of some strength, but, as modernised and improved in recent years, is now a fine Elizabethan structure, with a great square tower, a valuable library (formed by the patriot, Andrew Fletcher), and a large and well-wooded

park (Jn. Small's *Castles and Mansions of the Lothians*, 1883). Another mansion, noticed separately, is HERDMANSTON. Gilbert Burnet, D.D. (1643-1715), historian and Bishop of Salisbury, was minister from 1665 to 1669, and at his death bequeathed 20,000 merks for the benefit of the parish, to be applied in building a schoolhouse, clothing and educating 30 poor children, improving a library for the use of the minister, etc. Patrick Scougal, D.D. (1608-82), was minister from 1659 to 1664, when he was raised to the bishopric of Aberdeen; and his son Henry (1650-78), author of *Life of God in the Soul of Man*, has been claimed—wrongly it would seem—as a native. Salton is in the presbytery of Haddington and the synod of Lothian and Tweeddale; the living is worth £414. The church, which was held by Dryburgh Abbey from its foundation till the dissolution, was annexed in 1633 to the short-lived see of Edinburgh. As almost rebuilt in 1805, it is a cruciform Gothic edifice, with 400 sittings, a tower and spire 90 feet high, and the family vault of the Fletchers. A Free church for Salton and Bolton is situated in the latter parish, 1¼ mile NNE of East Salton. Salton public school, with accommodation for 129 children, had (1884) an average attendance of 95, and a grant of £85, 16s. Valuation (1860) £5070, (1885) £6011, 9s. Pop. (1801) 786, (1831) 786, (1861) 712, (1871) 647, (1881) 575.—*Ord. Sur.*, sh. 33, 1863.

Samphrey, an uninhabited island of Delting parish, Shetland, in the SE entrance of Yell Sound, ⅜ mile S by W of the south-western extremity of Yell island. It has an utmost length and breadth of 7½ and 4½ furlongs, and attains a maximum altitude of 99 feet.

Samson's Ribs. See ARTHUR'S SEAT.

Sanda, a small island, belonging to the parish of Southend, Argyllshire. It lies at the W side of the entrance of the Firth of Clyde, 1⅞ mile SSE of the nearest part of the peninsula of Kintyre, 6⅝ miles ESE of the Mull of Kintyre, and 10 S by E of Campbeltown. It has an utmost length and breadth of 1¼ and ⅜ mile; it consists of sandstone rock; and has a tumulated surface, with an extreme altitude of 405 feet above sea-level. Moderately high cliffs form part of its shores; and one of these is pierced with a very large natural arch, and forms a very picturesque object. The island is covered with good grass, and is all disposed in sheep-walk, in the tenancy of one farmer. Two islets, called Sheep Isle and Glunimore, lie off its NE side, and are also clothed in good grass. A small, good, natural harbour lies between it and these islets, and is a place of shelter and rendezvous for the smaller sort of vessels which navigate the Clyde. This harbour was a common station of the Scandinavian fleets during the contests for the possession of Kintyre and the Hebrides. The island, in this connection, was then called Avona Porticosa—a name which it still retains, in the abbreviated form of Aven, among the Highlanders; but it figures, under its more proper name of Sanda, in the more ancient record of Adamnan's life of Columba. There are remains on it of an ancient chapel which was dedicated to Columba, and of a circumjacent cemetery which appears to have long possessed some superstitious celebrity. A dangerous rock, above a mile in circumference, and bearing the name of Paterson's Rock, lies 1 mile E by N of Sanda; and, being always covered by flood tide, has endangered many a vessel. A lighthouse, erected on Sanda in 1850 at a cost of £11,931, shows an occulting light in a SW direction, from NW ½ W round to SE by E ½ E, visible at the distance of 17 nautical miles. Pop. (1841) 11, (1861) 36, (1871) 57, (1881) 14.—*Ord. Sur.*, sh. 12, 1872.

Sanday, a small island in the Hebridean parish of SMALL ISLES, Argyllshire, lying on the S side of the eastern extremity of CANNA, of which it may be viewed as constituting a portion, the two being united at low water by a beach of shell sand. It extends 1⅜ mile east-by-southward, has a maximum breadth of 5 furlongs and an area of 577⅜ acres, and is distant 2⅛ miles from Rum. Its surface is low at the side towards Canna, but rises at its south-western extremity to 192 and at its eastern to 131 feet above sea-level, terminating in abrupt cliffs, which are skirted with detached high masses of rock. See DUN-NA-FEULAN. Pop. (1871) 58, (1881) 62.

Sanday, one of the most considerable of the North Isles of Orkney. It contains a post office station of its own name. It lies 2¼ miles N of Stronsay, 1⅜ mile E of Eday, 7 miles E of Westray, and 2½ S of North Ronaldshay. Its form is exceedingly irregular, and may, in a general view, be regarded as three large peninsulas and two small ones radiating from a common centre. Its length, from NE to SW, is 13⅛ miles; and its breadth varies between ½ mile and 5 miles. Excepting a hillocky ridge of 116 to 173 feet in altitude on its W side, the island is extremely flat. Its soil is everywhere light and sandy, and, when well manured with seaweed, produces as good crops as any which are raised in Orkney. The principal harbours are Kettletoft on the SE side of the island, and OTTERSWICK BAY on the NE, both commodious and pretty safe. Eleven small lakes, the largest about 2¼ miles in circumference, and two or three others not much inferior to this, occur in various parts of the island, particularly in the N. On the promontory of Els Ness, which projects to the S, and commands an extensive sea view, are upwards of twenty vitrified cairns, supposed by Dr Hibbert to have been signal stations of the Norsemen for communicating with their fleets in the sound. The other antiquities of the island are the ruins of one or two ancient chapels, and of some considerable Picts' houses. Sanday is ecclesiastically divided into LADY parish on the E, and the united parish of CROSS AND BURNESS on the W. Five public schools—Burness, Cross, Lady, North Ronaldshay, and Sellibister—with respective accommodation for 80, 60, 140, 96, and 132 children, had (1884) an average attendance of 56, 49, 85, 55, and 79, and grants of £49, 18s., £52, 4s. 6d., £81, 7s. 6d., £36, 1s., and £90, 19s. 6d. Pop. (1831) 1839, (1861) 2145, (1871) 2053, (1881) 2082, of whom 1137 were in Cross and Burness, and 945 in Lady.

Sandbank and Ardnadam, a watering-place in Dunoon parish, Argyllshire, on the S side of Holy Loch, opposite Kilmun, and 2¾ miles NNW of Dunoon town. Of recent origin, it forms the upper end of the long line of summer sea-bathing resort extending through Hunter's Quay and Kirn to the southern extremity of Dunoon; occupies a similar site and enjoys similar amenities and advantages to those of Kilmun and Hunter's Quay; commands ready access to the romantic glens at the head of Holy Loch; enjoys communication with Greenock and Glasgow by means of the Kilmun steamers; and has a post office under Greenock, with money order, savings' bank, and telegraph departments, an hotel, a pier 200 feet long, a club-hall, a bowling-green, a coffee-house, a good water supply, a *quoad sacra* church, a Free church, a public school, and two newspapers—the Saturday *Argyllshire Standard* (1871) and the Wednesday *Cowal Watchman* (1876). The Established church, built as a chapel of ease at a cost of £840, has a stained-glass window and an harmonium, and was made *quoad sacra* in 1876. Pop. of village and parish (1871) 620, (1881) 570.—*Ord. Sur.*, sh. 29, 1873.

Sandend, a fishing village in Fordyce parish, Banffshire, to the SE of Crathie Point, and 2½ miles W by N of Portsoy.

Sanderay, an island in the Hebridean parish of Barra, Inverness-shire. It lies 3½ miles S of the island of Barra, 2½ miles NE of Pabbay, and ⅜ mile SSE of Vatersay, being separated from the last by a strait called the Sound of Sanderay. Though indented in outline, it is not far from being circular, with a diameter of 1½ mile; and it consists of a single hill of gneiss, which attains an elevation of 800 feet. To a certain extent it is sheltered from the western swell by the islets Fladda and Linga, but it is so covered with drifted calcareous sand as to present the appearance, at some distance, of being sheeted with snow. A very large Danish dun is on its E coast. Pop. (1871) 7, (1881) 10.

Sandford. See STONEHOUSE.

Sandford Bay. See PETERHEAD.

Sandhaven. See PITULLIE and PITSLIGO.

Sandhead, a village in Stoneykirk parish, Wigtownshire, on Luce Bay, 7 miles S by E of Stranraer. It has a post and telegraph office, an inn, a public school, and a natural harbour consisting of a small bay, and affording anchorage for lime and coal sloops.—*Ord. Sur.*, sh. 3, 1856.

Sands, a mansion in Tulliallan parish, Perthshire (detached), near the shore of the Firth of Forth, 1½ mile SE of Kincardine. Its owner, Laurence Johnston, Esq. (b. 1856), holds 987 acres in the shire, valued at £1079 per annum.—*Ord. Sur.*, sh. 39, 1869.

Sandside Bay. See REAY.

Sandsound Voe, an elongated narrow bay or sea-loch in Sandsting parish, Shetland. It opens at the extremity of the N side of Scalloway Bay, strikes 5½ miles north-north-westward, and is all narrow and winding.

Sandsting and Aithsting, a united parish in the middle of the mainland of Shetland, 13 miles and upwards NW of Lerwick, under which there are post offices at Tresta and Garderhouse. It comprises the islands of Vementry and Papa Little, with a number of smaller islets, and is bounded NE by Delting, E by Tingwall, W by Walls, and on all other sides by the sea. Its utmost length, from N to S, is 13¼ miles; its utmost breadth, from E to W, is 8½ miles; and its land area is 62¼ square miles, or 39,870 acres. The coast, which in places is bold and rocky, is deeply indented by Gruting, Skeld, Seli, and Sandsound Voes on the S, and by West Burra Firth, Brindister Voe, and Aith Voe on the N. The surface is everywhere hillocky, and, at no point reaching any noticeable elevation or admitting any considerable extent of plain, attains 297 feet in Vementry, 348 at the Ward of Scollan, 457 near the eastern border, 436 at Sand Field, 355 at the Giant's Grave, and 393 at the Ward of Culswick. A perfect network of fresh-water lochs is scattered over the interior, their number being estimated at no fewer than 140 in the *New Statistical Account.* Among the larger are Clousta, Vaara, Hulma, Gossa, Sulma, and Vaxterby Lochs, the last of which lies on the Walls boundary. The rocks include red granite in the W, quartzose gneiss, quartzite, hornblende slate, felspar porphyry, syenitic greenstone, etc. The soil, in a few places sandy, in some clay, and in others a light brown mould, is mostly a deep black moss. The arable land lies mostly along the shore. Antiquities are several standing-stones and sepulchral barrows, three or four Scandinavian brochs, and five pre-Reformation burying-grounds. Reawick is the chief mansion; and 6 proprietors hold each an annual value of between £100 and £500. Sandsting is in the presbytery of Olnafirth and the synod of Shetland; the living is worth £185. The parish church, built in 1780, contains 437 sittings. There are also Baptist and Congregational chapels; and 7 new public schools, with total accommodation for 442 children, had (1884) an average attendance of 284, and grants amounting to £290, 8s. Valuation (1860) £1617, (1884) £2678, 5s. 3d. Pop. (1801) 1493, (1831) 2194, (1861) 2670, (1871) 2806, (1881) 2702, of whom 1640 were females.

Sandwick, an Orkney parish on the W coast of Pomona, whose church stands 100 yards from the NE shore of the Bay of Skaill, and 5 miles N by W of Stromness, under which there is a post office. It is bounded N and NE by Birsay, E by Harray and the Loch of Harray, SE by Stenness and the Loch of Stenness, S by Stromness, and W by the Atlantic Ocean. Its utmost length, from N to S, is 5½ miles; its utmost width is 4¾ miles; and its land area is 18½ square miles or 11,827 acres. The coast, 7¼ miles in extent, is everywhere precipitous, except at the Bay of Skaill, which measures 6 furlongs across the entrance and 4½ thence to its inmost recess, and S of which the Ward Hill rises steeply to a height of 194 feet above sea-level. The western district is somewhat hilly, in the S attaining 342 feet at Crua Breck, 252 at Gyran, and 206 at Linga Field, in the N 305 at Vestra Field; whilst the eastern district slopes gently towards the Lochs of Harray and STENNESS. The Loch of Skaill (7 × 4 furl.) is the largest of seven small fresh-water lakes scattered over the interior. The rocks include granite, flagstone, sandstone, and trap; bog-iron, clay, and marl are plentiful; and moss yields abundance of peat-fuel. To abridge from a recent article by Mr Pringle, 'The parish of Sandwick presents a more fertile aspect than that of Stromness, and a more advanced state of agricultural industry. The manse has a singularly cosy look for an Orkney dwelling owing to the thriving plantation which is growing in front of it. There are about 70 heritors, and the valuation of many of these lairds does not exceed £15 to £20 per annum, whilst some are valued as low as £5 per annum. They are the relics of the old Norse udallers, a class of freeholders once very common in Orkney, but now existing only in some parts of the West Mainland. Hitherto this class has not done much in improving their lands, and their houses and habits are those of the lowest rank of peasantry. If they make a shilling they put it past, and no inducement is sufficient to cause them to part with it. The improved appearance of the parish is owing chiefly to the operations carried by the late W. W. G. Watt, Esq. of Breckness, who owned fully two-thirds of the parish. Mr Watt's father for many years farmed a large portion of his property, and had effected great improvements on it fifty years ago, and the work so begun was carried out on a still more extensive scale by his son. The farms of Skaill and Kierfiold are as highly improved and well cultivated as if they had been situated in East Lothian, instead of on the N side of the Pentland Firth. These farms are contiguous, but are worked separately. A considerable part of Skaill has been long under cultivation, whereas but little more than thirty years ago Kierfiold was a rabbit warren and commonty, from which state it was reclaimed by the late proprietor. The soil of both farms varies from pure sand to a stiff clay loam, and their extent altogether is upwards of 700 acres.' Near the coast are remains of a large building, the 'Castle of Snusgar;' and other antiquities are standing-stones, vitrified cairns, a cromlech, Scandinavian brochs, a great number of sepulchral barrows, and ruins of a small old church. A large collection of ornaments, ingots, coins, etc. (more than 16 lbs. in weight), was found in 1858 in a sandhill near the N side of the Bay of Skaill, and is now in the Edinburgh Antiquarian Museum. This deposit, which was probably the concealed hoard of some of the Scandinavian Vikings of the 10th century, consists of five large penannular ring brooches, having bulbous extremities shaped like thistle-heads, and ornamented with dragonesque tracery on one side and prickly-like ornament on the other; four penannular ring brooches, with flattened extremities and thistle-headed acus; thirteen wreathed neck-rings of silver wires, spirally twisted together, and with recurved ends or hook and eyelet fastenings; an arm-ring, 3⅜ inches inner diameter, of spirally twisted plaits of silver wire, welded into solid ends, which terminate in dragonesque heads; a flat arm-band of thin metal; an armlet or anklet, penannular in form and triangular in section; twenty-five plain rings of the same form; a quantity of ingots of silver; a quantity of fragments of brooches, rings, etc., which have been purposely chopped into small pieces; seven Cufic coins of the Samanian, and two of the Abbasside Caliphs, dating from A.D. 887 to 945; a coin of Æthelstan, 925, struck at Leicester; and a Peter's Penny, struck at York. The Rev. Charles Clouston, LL.D., eminent as a meteorologist, naturalist, and antiquary, was minister from 1833 till his death in 1884. Sandwick is in the presbytery of Cairston and the synod of Orkney; the living is worth £181. The parish church, built in 1836, contains 564 sittings. There are a U.P. church of Sandwick (1828) and a Free church of Harray and Sandwick; and the North and South public schools, both of recent erection, with respective accommodation for 75 and 60 children, had (1884) an average attendance of 54

and 51, and grants of £46, 12s. and £36, 16s. 6d. Valuation (1860) £2070, (1884) £3660, 11s. 1d. Pop. (1801) 970, (1831) 973, (1861) 1225, (1871) 1153, (1881) 1198.

Sandwick, a hamlet, an ancient parish, and a *quoad sacra* parish in the S of Shetland. The hamlet lies on the E coast of Mainland, 13 miles SSW of Lerwick, under which it has a post and telegraph office. The ancient parish lies around the hamlet, and is now annexed, *quoad civilia*, to Dunrossness. The *quoad sacra* parish, comprehending the ancient parishes of Sandwick and Conningsburgh, is in the presbytery of Lerwick and synod of Shetland. Stipend £130. The church was built in 1807 at the expense of government, and contains 564 sittings. A Free church is in Conningsburgh; and a Congregational chapel, a public school, and a parochial library are in Sandwick. Pop. of *q. s.* parish (1871) 2326, (1881) 2308.

Sandwick, a village in Stornoway parish, Lewis, Ross-shire, 1¼ mile E by S of the town. Pop. (1871) 445, (1881) 525.

Sandy Knowe. See SMAILHOLM.

Sannox. See GLENSANNOX.

Sanquhar, a small town and a parish of Upper Nithsdale, Dumfriesshire. A royal and parliamentary burgh, the town stands 440 feet above sea-level, within 3 furlongs of the Nith's left bank. By road it is 32 miles ESE of Ayr, 18¾ SW of Abington station, and 56 SW of Edinburgh; whilst its own station on the Glasgow and South-Western railway (1850) is 26¼ miles NNW of Dumfries and 16¼ ESE of Cumnock. The main street runs 5 furlongs south-eastward along the Glasgow and Dumfries highroad (1777); and on a rising-ground, at its upper end, stands the parish church (1824; 960 sittings), a handsome edifice with a square tower. This succeeded a building which was remarkable for its size and disproportion, and which, from some sculptured stones in its walls, was supposed to be of great antiquity. At an expansion of the High Street, a short way from its head, is the town-hall, built at the expense of the last Duke of Queensberry, and having a tower and clock. On a steep bank, overlooking the Nith, about 1 furlong from the foot of the town, stands the picturesque ruin of Sanquhar Castle. This seems to have been a strong quadrangular structure, with towers at the angles. On the N side was a deep fosse with a drawbridge; on the W were gardens, whose site retains traces of a fish pond; on another side was a spacious deer park; and a little way to the SE is the ancient mote of Ryehill. Either the castle, or some fortified predecessor on its site, seems to have given origin, as it certainly gave name, to the town; for 'Sanquhar,' originally and for centuries spelt 'Sancher' or 'Sanchar,' is simply the Celtic *seann-caer*, 'an old fort.' The earliest proprietors of the castle and circumjacent lands, or Lords of Sanquhar, were the Roos, Roose, or Ross family, cadets of the Earls of Ross, Lords of the Isles. Isabel de Ross, daughter and heiress of Robert de Ross, the last of the line, married William de Crichton, who died in 1360; and Sir Robert de Crichton, their great-grandson, was, in 1485, created Lord Crichton of Sanquhar. The sixth Lord, Robert, was hanged at Westminster in 1612 for the murder of a fencing master; and his kinsman and successor, William, first Earl of DUMFRIES, who in 1617 welcomed James VI. to the 'Peel' of Sanquhar, in 1630 disposed of lands, lordship, and castle to William Douglas, Viscount of DRUMLANRIG. The castle became now the seat of the proud Drumlanrig Douglases. Even after William, first Duke of Queensberry (1637-95), had built the magnificent palace of Drumlanrig, he spent but one night within its walls, and retired for the remainder of his days to Sanquhar Castle. The old pile was forsaken, however, by the second Duke, and abandoned to utter neglect. Plunderers speedily thronged upon it, first to divest it of its leaden roof, next to use it as a quarry, until they left not a vestige of its ancient magnificence except its gaunt but venerable ruin. Excavations carried out in 1876 brought to light several human skeletons and a very deep well with a bucket suspended in it.

Sanquhar rose into considerable prosperity under the fostering care of the third Duke of Queensberry, who, at a cost of £1500, formed for at least 21 miles across his estate, the great line of road which passes through the burgh between Dumfries and the West of Scotland. He also cut, at an expense of £600, a cross road running up Minnick Water to Wanlockhead, and at a cost of £300, a road in the neighbouring parish of Kirkconnel, leading up to a lime-work at Whitecleugh; whilst, jointly with the trustees for the encouragement of manufactures, he gave £40 a year to be distributed among stocking-makers and other manufacturing artificers in the town and its vicinity. The knitting of stockings and mittens, mostly parti-coloured and very various in pattern, long formed a staple manufacture, and afforded a large number of the lower classes a comfortable support; but this industry was extinguished by the outbreak of the American War in 1775, the principal market having till then been Virginia. The weaving of carpets has also greatly declined; and brick and tile making, coal-mining, and the manufacture of shovels now constitute the leading industries. Sanquhar has a post office, with money order, savings' bank, and telegraph departments, branches of the British Linen Co. and Royal Banks, a local savings' bank (1819), 10 insurance agencies, 2 hotels, gas and water companies, a public library, a bowling green (1871), a curling club (1774), and fairs on the first Fridays of February, May, August, and November (all old style), and on 17 July if a Friday, otherwise on the first Friday following. Places of worship, besides the parish church, are a Free church (1845; 500 sittings), the North U.P. church (1849; 550 sittings), of which the Rev. Robert Simpson, D.D. (1792-1867), author of *Traditions of the Covenanters*, etc., was 48 years minister; the South U.P. church (1742; 500 sittings), an Evangelical Union church (1864; 300 sittings), and a small Baptist chapel.

The 'Corda' of Ptolemy, a town of the Selgovæ, Sanquhar was a burgh of barony from time immemorial, and was re-erected in 1484. In 1598, at the instance of Robert, sixth Lord Crichton of Sanquhar, it was, by charter of James VI., constituted a royal burgh. The town council consists of a provost, 2 bailies, a dean of guild, a treasurer, and 4 councillors. A grey granite monument, erected in 1860, marks the site of the old town cross, to which were affixed the two famous Sanquhar 'Declarations'—the first on 22 June 1680 by Richard Cameron, disowning allegiance to Charles II.; the second on 29 May 1685 by the Rev. James Renwick, witnessing against the usurpation of the government by James VII. Sanquhar unites with DUMFRIES, Annan, Kirkcudbright, and Lochmaben in returning a member to parliament. Parliamentary constituency (1885) 210; municipal, 217. Corporation revenue (1832) £66, (1865) £354, (1884) £280. Valuation (1855) £2163, (1885) £4120. Pop. (1831) 1527, (1841) 1719, (1851) 2381, (1861) 1754, (1871) 1324, (1881) 1339, of whom 715 were females, and 1299 were in the royal burgh. Houses (1881) 350 inhabited, 31 vacant.

Seal of Sanquhar.

The parish, containing also the village of WANLOCKHEAD and part of CRAWICK MILL, since 1727 has comprehended great part of the ancient parish of Kilbride or Kirkbride. It is bounded NW by Kirkconnel, NE and E by Crawfordjohn and Crawford in Lanarkshire, SE by Durisdeer, S by Penpont and by Dalry in Kirkcudbrightshire, and W by New Cumnock in Ayrshire. Its utmost length, from ENE to WSW, is 15⅜ miles; its utmost breadth is 7¼ miles; and its area is 64½ square miles or 41,077¾ acres, of which 231½ are water. The

Nith flows 2 miles east-south-eastward along the Kirkconnel border, then 5¼ miles through the interior: and amongst its numerous affluents the chief are Kello Water, running 8⅝ miles north-eastward along the New Cumnock and Kirkconnel boundary; Crawick Water, running 8 miles south-south-westward along the Kirkconnel boundary; Euchan Water, running 9¼ miles east-north-eastward through the south-western interior; and Minnick Water, running 6⅞ miles west-south-westward through the north-eastern interior. Declining along the Nith, at the point where it quits the parish, to 347 feet above the sea, the surface is everywhere hilly or mountainous. Chief elevations to the NE of the Nith are Dalpedder Hill (1291 feet), *Cairn Hill (1471), *Threehope Height (1802), Brown Hill (1544), Willowgrain Hill (1686), *Lowther Hill (2377), Stood Hill (1925), *Wanlock Dod (1808), and Conrig Hill (1591); to the SW *Heathery Hill (1669), Whiteside Hill (1695), Mid Hill (1695), *Corse Hill (1902), and *Blacklarg Hill (2231), where asterisks mark those summits that culminate on or close to the confines of the parish. The vale of the Nith is here a mimic strath of considerable beauty, flanked by hill-screens which are cleft by little transverse vales, each bringing down its tribute rivulet to the Nith. The rest of the surface is hilly, partly green and partly heathy, exhibiting great diversity of upland character and mountain contour. The rocks of the uplands are nearly all of Silurian formation. A coalfield, extending along the Nith, is supposed to be a wing of the great field of Ayrshire. Extensive lead mines are worked at Wanlockhead; and coal mines, as also quarries of sandstone and limestone, are worked in the carboniferous region. The soil in the vale of the Nith, and in the lower parts of some of the lateral vales, is in general dry and gravelly, and in some places loamy; but that in the other districts is for the most part clayey or mossy, much of it very wet, yet generally deep and well adapted for grazing. Rather less than one-seventh of the entire area is in tillage; nearly 800 acres are under wood; and almost all the rest is pastoral or waste. Castle-Gilmour stood near the right bank of Minnick Water, Kemps Castle on the left bank of Euchan Water; and other antiquities are part of the Deil's Dyke running S of the Nith, a crannoge in Black or Sanquhar Loch, and remains of barrows, stone circles, etc. The glens and moors were the frequent retreat of the persecuted Covenanters. The Rev. Andrew Thomson, D.D. (1779-1831), an eminent Edinburgh minister, was born in the former manse; and a yet more illustrious native, the 'Admirable' Crichton (1560-83), was born in Elliock House. The Duke of Buccleuch holds more than five-sixths of the entire rental, Mr Veitch about one-ninth, and the rest is mostly divided among three. Since 1861 giving off the *quoad sacra* parish of Wanlockhead, Sanquhar is in the presbytery of Penpont and the synod of Dumfries; the living is worth £490. Four schools—Sanquhar public, the Crichton (founded 1821), Minnick Bridge, and Wanlockhead—with respective accommodation for 258, 160, 66, and 136 children, had (1884) an average attendance of 130, 147, 29, and 144, and grants of £106, 6s., £130, 7s., £25, 0s. 6d., and £120, 11s. Valuation (1860) £14,135, (1885) £15,044. Pop. (1801) 2350, (1831) 3268, (1851) 4071, (1861) 3569, (1871) 3038, (1881) 3109, of whom 2255 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 15, 1864. See the Rev. Dr J. Moir Porteous' *God's Treasure-House in Scotland* (Lond. 1876).

Sanquhar House. See Forres.

Sarclet, a small fishing village in Wick parish, Caithness, 5 miles S of Wick town.

Sark, a small river in the extreme SE of Dumfriesshire. It is formed by the confluence of Woodside or All-for-nought Burn, tracing the northern boundary of Half-Morton, and Hall Burn, out of Canonbie; and it winds 11¼ miles in a southerly and a south-south-westerly direction to the head of the Solway Firth. For the first 3¾ miles it divides Half-Morton from Canonbie; and afterwards, over a distance of 7½ miles, it divides Half-Morton and Gretna from Cumberland. Its sources lie among the lower declivities of the Eskdale Hills; but by far the greater part of its course is across either a low and beautiful plain or along the skirts of the Solway Moss. It yields fair trout-fishing; but during a comparatively dry summer it almost ceases to exist.—*Ord. Sur.*, shs. 10, 6, 1864-63.

Sark, The Black, a rivulet of SE Dumfriesshire, rising at Burnfoot Hill, near Sarkshiels, in the parish of Kirkpatrick-Fleming, and flowing south-eastward through that parish, and through Half-Morton and Gretna, to the Sark, ¾ mile above Springfield.

Sauchie, an estate, with a mansion and a ruined fortalice, in St Ninians parish, Stirlingshire, 3 miles SSW of Stirling. At the death of his cousin, Mr Ramsay, in 1865, it passed, with Barnton, to Sir Alexander Charles Gibson-Maitland, Bart., of Clifton Hall, whose great-grandfather, the Hon. Gen. Alexander Maitland, received the baronetcy in 1818, and was the fifth son of Charles, sixth Earl of Lauderdale. Accordingly his son, Sir James Ramsay-Gibson-Maitland, present and fourth Bart. (b. 1848; suc. 1876), is a claimant, since August 1884, to the earldom of Lauderdale. (See Thirlestane Castle.) He holds 6023 acres in Stirling and 4505 in Edinburgh shire, valued at £5809 and £14,246 per annum.

The Battle of Sauchie, called also the Battle of Sauchieburn or Stirling, was fought on 11 June 1488, between James III. and his insurgent nobles. The two armies met on a tract of ground, now called Little Canglar, on the E side of the streamlet of Sauchie Burn, about 1½ mile from the field of Bannockburn. The malcontent army was 18,000 strong, and was ranged in three divisions, commanded respectively by Lords Home and Hailes, by Lord Gray, and by officers acting as prompters to the Prince of Scotland, a youth of 15. The King's army is variously stated in strength, and was also disposed in three divisions, commanded, we are not told under what arrangement, by the Earls of Menteith and Crawford, the Lords Erskine, Graham, Ruthven, and Maxwell, and the second Lord Lyndsay of the Byres. The King was armed *cap-a-pié*, and mounted on a spirited grey charger, which Lord Lyndsay had given him that very day, with the assurance that he might at any moment trust his safety to its swiftness and surefootedness, provided only he could keep his seat. The malcontents saw their first line driven back at the onset; but, the second speedily giving support, all became firm and composed; and they soon not only recovered their ground, but pushed the first and the second lines of the royalists back to the third. The King, who was not noted for courage, soon lost the little he possessed; and—previous to the striking of any decisive blow—put spurs to his horse, and galloped off, with the view, it is thought, of saving himself on one of Sir Andrew Wood's two ships, which lay in the Forth near Alloa. After the King's flight, his troops continued to fight with great bravery; but, eventually finding themselves unable to stand their ground, and disheartened by a flying rumour of the King's death, they began to retreat towards Stirling, and were allowed to retire without much pursuit. The victorious army lay all night upon the field, and next day marched to Linlithgow. The number of slain on both sides must have been great, as the action was of several hours' duration, and stubbornly maintained; and, on the royalists' side, it included the Earl of Glencairn, and some other persons of high rank. James himself, in his flight, was on the point of crossing the Bannock Burn at the village of Milton, when his horse started at a pitcher which a woman, in the act of drawing water, dropped at the sight of the furious rider. The King was thrown to the ground, and sustained such damage from his fall and the weight of his armour, that he fainted away. He was removed, by the miller and his wife, into a mill in the immediate vicinity, and treated by them, though ignorant of his rank, with every possible care. When he had somewhat recovered, he told them who he was; and, supposing himself dying, called for a priest. The miller's wife flew in search of

a ghostly adviser, and, meeting a party of the malcontents who had observed the King's flight, and were tracking his steps, entreated that, if there were a priest among them, he would stop and 'shrive his majesty.' 'I,' said one of them, whose name is not certainly known, 'I am a priest: lead me to him.' Being introduced, he approached on his knees under pretence of reverence, treacherously ascertained that the King thought he would recover if he had the aid of a surgeon, and then stabbed him again and again to the heart. 'Beaton's Mill,' a small old house, with crow-stepped gables, but a mill no longer, is pointed out as the scene of this tragedy. The King was buried in CAMBUSKENNETH Abbey.—*Ord. Sur.*, sh. 39, 1869.

Sauchie, a village in the detached portion of Clackmannan parish, with a station on the Devon Valley railway, 1½ mile N by E of Alloa, under which it has a post office. A church here, built as a chapel of ease in 1841-42, was raised to *quoad sacra* status in 1877. Pop. of *q. s.* parish (1881) 2935, of whom 1252 were in Alloa parish and 1683 in Clackmannan.—*Ord. Sur.*, sh. 39, 1869.

Sauchieburn. See SAUCHIE.

Saughs, Water of. See WEST WATER.

Saughton, New, or **Cammo,** a mansion of 1693, with finely wooded grounds, in Cramond parish, Midlothian, 5 furlongs SSW of Cramond Bridge, and 2½ miles WSW of Davidsons Mains.

Saulseat or **Soulseat,** an ancient parish and an abbey of Wigtownshire. The parish was a vicarage under the monks of the abbey; and, about the middle of the 17th century it was incorporated with Inch. Its ecclesiastical revenues are divided between the minister of Inch and the minister of Portpatrick. The abbey stood on a peninsula of Saulseat Loch (4 × ½ to 2½ furl.), in the vicinity of the present manse (1838) of Inch, 3 miles ESE of Stranraer. The building was in ruins in 1684, when Symson wrote his *Description of Galloway;* and it is now commemorated only by some grassy mounds. Its burying-ground contains some curious gravestones, one of them bearing date 1647. The abbey was founded, in 1148, by Fergus, Lord of Galloway, for Premonstratensian monks. It was called in Latin *Sedes Animarum* ('souls' seat') or *Monasterium Viridis Stagni* ('monastery of the green loch'); but some have derived its name from its having had one Saul for its first abbot, and so being *Sedes Saulis* ('the seat of Saul'). Chalmers says, 'It was the mother of the more celebrated and opulent priory of Whithorn, as well as of the abbey of Holywood, both of which were planted by monks of the same order. It appears to have been the original establishment of the Premonstratensian monks in Scotland; and the abbots of Soulseat were the superiors of that order in this kingdom.' Its abbacy was one of the few in Scotland, the appointment of which remained with the King, and could not be disposed of or controlled by the Pope. The abbey never rose to any eminence or figured conspicuously in history. In 1568 its abbot, along with some of the most distinguished men of the kingdom, subscribed a bond obliging themselves to defend Queen Mary.—*Ord. Sur.*, sh. 3, 1856.

Scalloway, a seaport village in Tingwall parish, Shetland, 6 miles WSW of Lerwick. Its cottages are of a better description than most in the northern islands; and, arranged round a fine semicircular sweep of bay, they combine with the sea-scene in front, and the old castellated mansion of Scalloway towering above them in the rear, to form a picturesque landscape. The harbour is naturally good, and is supposed to have given to the locality the name of Scalloway, or 'the huts on the bay'—*Skali* signifying 'a booth or shieling,' and *vagr,* transmuted into *way,* 'a voe or roadstead.' The village was anciently a burgh, and the capital of Shetland. A century ago most of the great Shetland landowners had residences here. The great bulk of the present population are fishermen and their families. A large quay, warehouses, and a cooperage were erected, a good many years ago, for the accommodation of the fisheries; and Scalloway has a post office under Lerwick, with money order, savings' bank, and telegraph departments, a branch of the Union Bank, a Congregational chapel, a Baptist chapel, and a public school. Pop. (1861) 448, (1871) 525, (1881) 648.

Scalloway Castle, situated above the village, was built in 1600 by Patrick Stewart, the tyrannical Earl of Orkney. A previous mansion of the Earl, at Sumburgh, having given way in consequence of the sandiness of its foundation, the despot compelled the inhabitants, on pain of forfeiting their property, to find as many men as were required for speedily building a new castle, and to supply them gratuitously with provisions; and he superintended and matured the execution of his ignoble plan by means of a military force. The castle, though now a mere shell, exhibits plentiful and distinct indications of its original condition. It is a structure of three stories, surmounted at each angle by a small round turret. The windows are very large; but the principal door is quite disproportionate and even puny. On the ground floor are an excellent kitchen and vaulted cellars, with a broad flight of ascending steps; and above are a spacious hall and suites of ordinary sized chambers.

Scalpa or **Scalpay,** an island in the Harris district of the Hebrides. It lies at the entrance of East Loch Tarbert, ½ mile from the northern, and 3 miles from the southern, headland. It measures 2⅞ miles in extreme length, and 1½ mile in extreme breadth; but is much indented, and cut into small peninsulas, by the sea. It is low and heath-clad, and consists of irregular protuberances of gneiss. A bed of serpentine, generally placed at a high angle, and often having a vertical position, traverses a promontory in the extreme E. Near the western extremity are two of the best natural harbours in the Hebrides. Pop. (1841) 31, (1861) 388, (1871) 421, (1881) 540.

Scalpay, an island of Strath parish, Skye, Inverness-shire, separated from the E coast of Skye by Scalpay Sound or Loch na Cairidh, which, at two points, is less than ½ mile broad. It lies off the mouth of Loch Ainort, and is 7 furlongs SSE of Raasay, 9½ miles SSW of Applecross, and 7½ W by N of Kyleakin. It is of an irregularly oval shape of 4½ by 3 miles; and has the longer axis from NW to SE. Most of its area is occupied by a grassy mountain (994 feet) of uneven summit and rounded outline, displaying much bare rock, yet nowhere marked by asperities or wearing a barren aspect. The descent, in most places, but especially along the side towards Skye, comes down in smooth and gentle declivities to the sea; but, towards the NE, it terminates in bold though not very high cliffs. The Sound of Scalpay is a noted rendezvous of the herring fleet; and it abounds in oysters, some of which, both fish and shell, are black, while others are of a dingy blue colour. These oysters are supposed to be only a variety of the common species, and to derive their unwonted hue from the dark mud in which they breed. On the island are vestiges of an ancient chapel dedicated to St Francis. Pop. (1841) 90, (1861) 70, (1871) 48, (1881) 37.

Scalpay Sound. See SCALPAY.

Scalpsie Bay, a bay (9¼ × 5 furl.) on the SW coast of the island of Bute. It penetrates the boundary between the parish of Kingarth and the parish of Rothesay; and is screened on the N side by a small promontory, called Ardscalpsie Point (90 feet), 1½ mile ESE of the S end of Inchmarnock.

Scamadale, Loch. See KILNINVER.

Scapa Flow, a large expanse of sea interspersed with land in the southern parts of Orkney. Irrespective of lateral recesses and outlets, it measures about 15 miles in extreme length from N to S, 8 miles in mean breadth, and 45 or 47 miles in circumference. In a general view it may be regarded as having Pomona on the N, Burray and South Ronaldshay on the E, the Pentland Firth on the S, the island of Hoy on the W, and the small islands of Cava, Risa, Pharay, Calf, Flotta, Switha, and Hunda in its bosom. In the extreme NW it opens by Hoy Sound, 7 miles in length and 2 in mean breadth, to the Atlantic Ocean; in the NE, it opens by

Holm Sound, 3½ miles by 2, to the German Ocean; in the middle of the E side, it opens by Water Sound, 4 miles by ½ mile, to the same ocean; and, in the S, it has the island of Swona near the middle of the line where it becomes identified with the Pentland Firth. This isle-begirt sea abounds, in its numerous recesses, with safe roadsteads and fine harbours. The chief is Longhope, in Walls, quite landlocked, capacious enough for the largest fleet, and possessing good anchorage and sufficient depth of water for the largest ship in the British navy; and others are Holm Sound, Widewall Bay, St Margaret's Hope, and Panhope. The tide, at its entering Scapa Flow from the SW, and through the Sound of Hoy, flows with rapidity akin to its current through the Pentland Firth; but it gradually slackens, till its motion becomes scarcely perceptible. At one part of the coast of Graemsay lying in the Sound of Hoy, the current, in consequence of being intercepted by a reef of rocks, runs 9 hours in one direction and 3 in the opposite.

Scar. See KIRKCOLM.

Scarba, an island in the Hebridean parish of Jura and Colonsay, Argyllshire. It lies 1½ mile N of the island of Jura, and 3½ miles WNW of Craignish Point on the mainland. Its length is 3½ miles, and its greatest breadth is 2⅜; but its mean breadth is much less. Most of it consists of a single mountain of an oblong conoidal form, which towers aloft to a height of 1500 feet, and is conspicuous at a distance as much for its outline as for its altitude. The shores on the S, the W, and the N are generally high, rocky, and precipitous; and, in some places, they consist of a perpendicular face or sheer fall of several hundred feet of the mountain. All these shores and the high grounds, wherever not quite naked, are for the most part covered with heath. But the E side of the island is eminently beautiful: it recedes in a semicircular curvature from the sea, so as to enclose a fine bay in a magnificent amphitheatre; it arises up along the seaboard with a uniform and quite practicable acclivity; it has a subsidiary and comparatively low ridge of rising ground along the skirt of the interior mountain; it is sheeted over with verdure and with natural woods, occasionally interrupted by projecting rocks; and in all the magnificent sweep of its recess from the bay, it commands a view of the variegated and intricate channel of the Slate islands, with the sound of Oban, and the distant ranges of mountains that extend from Ben Cruachan to Ben Nevis. Quartz rock, dipping towards the E in angles of 40 or 50 degrees, forms the principal body of the mountain; but it alternates with and passes into micaceous schist; and both it and the varieties which the intermixture with it of the micaceous schist produces, alternate with clay-slate. The island belongs to F. Gascoigne, Esq. of Craignish, and is under deer. Scarba (Norse *Skarpey*) is the Engaricenna of Ptolemy, and one of his five Ebudæ. Pop. (1861) 13, (1871) 7, (1881) 19.

Scare, Big and Little. See LUCE BAY.

Scarfskerry, a hamlet in the NE corner of Dunnet parish, Caithness, on the coast, 7½ miles NE of Castletown. It has a post office under Thurso.

Scarp, an island in the Hebridean parish of Harris, Inverness-shire, ½ mile W of the nearest point of the island of Harris proper. Its length north-westward is 3 miles; and its greatest breadth is 2¼ miles. It consists chiefly of one mountain of gneiss rock, with little soil, and rising to an altitude of 1000 feet above sea-level. Pop. (1841) 129, (1861) 151, (1871) 156, (1881) 213.

Scarsburgh. See JEDBURGH.

Scar Water, a troutful rivulet of Nithsdale, Dumfriesshire, rising within 1¼ mile of the meeting-point of Dumfries, Kirkcudbright, and Ayr shires, at an altitude of 1600 feet, and flowing 18⅜ miles east-south-eastward —for the first 11⅜ miles through PENPONT parish, and then along or close to the boundaries of Tynron and Keir—till, after a descent of 1420 feet, it falls into the Nith at a point 2 miles S by W of Thornhill.—*Ord. Sur.*, shs. 15, 9, 1864-63.

Scatwell, a mansion in Contin parish, Ross-shire, on the right bank of the Conan, near the Meig's influx, 10 miles WNW of Muir of Ord station. Its owner, Alex. Mackenzie, Esq. (b. 1812; suc. 1856), holds 10,052 acres in the shire, valued at £899 per annum.—*Ord. Sur.*, sh. 83, 1881.

Scavaig, Loch, a remarkable inlet of the sea, a scene of wild and dismal grandeur, on the SW coast of Skye. It measures 4¾ miles across the entrance, and 3 miles thence to its inmost recess; and it penetrates among the Cuchullin Mountains. Its flanks are stupendous heights of bare rock, which shoot abruptly up from the bosom of the sea, and, being composed of hypersthene, have a singularly dark and metallic aspect. 'But,' says Dr Macculloch, who brought this remarkable piece of scenery into notice, and is the fittest person to describe it, 'it is impossible to convey any idea of this spot, which before my visit had never been seen by a stranger, and was indeed known to few, even of the inhabitants of Skye. Scarcely any but shepherds had trod these sequestered retreats, the dwelling of clouds and solitude; fit haunts for the poetical demons of the storm. Loch Scavaig is inaccessible by land on the N side, and equally so on the S, to all but the active and practised mountaineer. The traveller whose object is picturesque beauty, should enter it from Strathaird. In this direction the view from the sea is extremely fine, the dark ridge of the Cuchullin, with all its spiry and serrated projections, flanked by the equally dark and lofty ridge of Blaven, forming a varied and rugged outline of the sky. On entering the bay, these summits disappear, as they retire below the high skirts of the hills which descend into the sea, varied by projecting points and rocky islets, and surrounding the spectator with a continuous surface of bare and brown rock, scarcely presenting a symptom of vegetation. The falling of a cascade, the deep dark green of the the water, and the wheeling flight of the sea-birds that frequent this retired spot, are the only objects which vary the uniformity of colours and of character it everywhere displays. On landing, similar scenes meet the eye in every direction, no intruding object occurring to diminish the effect produced by the gloomy grandeur and savage aspect of the place.' See CORUISK and CUCHULLINS.

Schaw Park, a seat of the Earl of Mansfield, in Alloa parish, Clackmannanshire, 2½ miles NNE of the town. It is a fine mansion, and commands a wide and beautiful prospect.

Schel. See MOREBATTLE.

Schiehallion, an isolated mountain of Perthshire, on the mutual border of Fortingall and Dull parishes, 4¼ miles SE of Kinloch-Rannoch, and 11 WNW of Aberfeldy. Its altitude above sea-level is 3547 feet. It is situated at the eastern entrance of the district of Rannoch, a little detached from the long ridge of 7 miles breadth at the base, and 3000 feet or upwards in mean elevation, which divides Rannoch from the vales of Glenlyon and Fortingall; and, seen on entering the country by any approach from the Lowlands, it has a conspicuous and commanding appearance. Viewed from the NW, it seems a cone; but viewed from the S or E, it is seen to be elongated eastward and westward, to rest on a long narrow base, to rise gently at its E end, and to be steep on the W and on the S side. Its outline is, on the whole, curvilinear, and has fewer angles and breaks than that of most of the monarch-heights of the Highlands. The view from its summit promises, *a priori*, to be magnificent; but, when actually seen, it greatly disappoints. The valley of the Tummel is sufficiently remote to appear trifling; Loch Rannoch seems stript of its attractions, and sinks into comparative tameness; Glenlyon is shut out by the interposed mountain-range; and all else is a tumultuous sea of wild elevations, among which the eye traces few striking forms. Schiehallion is known throughout the scientific world as the scene, in 1772, of curious observations by Dr Nevil Maskelyne, astronomer-royal, to ascertain the mean density of the earth by observing the effect of the mountain on the plumb-line; and it afterwards acquired additional celebrity

from the visit and notices, first of Dr Playfair, and next of Dr Macculloch. The name is said to be a corruption of the Gaelic *Ti-chaillinn*, 'the maiden's pap.'—*Ord. Sur.*, sh. 55, 1869.

Schivas. See TARVES.

Scone, a parish containing the hamlet of Old Scone and the town of New Scone, in the SE of Perthshire, on the E bank of the river Tay. It consists of a main body and a detached section, the latter lying 5 miles NE of the nearest part of the main body, between the parishes of Cargill and Kettins, to the latter of which it is annexed for ecclesiastical purposes. The area is 717½ acres. The main portion is bounded N and NE by the parish of St Martins, E by the parish of Kilspindie, SE by a detached section of the parish of Kinnoull, S by the parishes of Kinfauns and Kinnoull, and W by the parishes of Perth, Tibbermore, and Redgorton. On the W the boundary line follows the Tay for 4½ miles, and elsewhere it follows the courses of two of the burns for a short distance, but it is mostly artificial. The length, from Colen Wood on the N to the point on the river Tay where the parishes of Kinnoull, Perth, and Scone meet on the S, is 3¾ miles; the extreme breadth, from the point on the E where the parishes of St Martins, Kilspindie, and Scone meet, near Blackcraig, to the bend of the Tay at the NW corner of the policies of Scone Palace on the W, is 5 miles; and the area is 7237¼ acres, of which 139½ are water. The surface rises in gentle undulations from the Tay towards the eastern boundary, where it attains an extreme height of over 500 feet. The whole is fertile and well cultivated, and there are numerous belts and clumps of trees. The surface of the detached portion immediately SE of Burrelton has been practically noticed under KETTINS. The prevailing rocks are basalts and sandstones, both of which are quarried. Along the W side near the Tay is a strong rich clay, elsewhere the soil varies from good deep black loam to a light sandy gravel. The drainage is carried off by the Tay and some small burns flowing into it. Of these the chief are one in the N at Stormontfield, one flowing from Muirward Wood farther S, two flowing through the policies of Scone Palace, and one to the S of New Scone, flowing through the Den of Scone. The principal antiquities are two stone circles, each about 21 feet in diameter, in the SE of the parish—one to the WNW of the town of New Scone, and the other about 1 mile to the NE near Shianbank; a cairn in the N near Barclayhill House; traces of a reach of Roman road which, coming from Ardoch, crossed the Tay at Derders Ford, W of the palace of Scone, and passed in a straight line N by E till it left the parish near Colen; remains of a Roman camp on this road, N of the Palace policies; and the site of an old fortification called Gold Castle in the NW of the Palace policies. The old palace and the Mote Hill * are subsequently noticed. The great Earl of Mansfield (1705-93), being one of the Stormont family, was connected with the parish though born at Perth, and Scone was itself the birthplace of David Douglas (1799-1834) the traveller and botanist. The parish is traversed by the roads from Perth to Blairgowrie, Coupar-Angus, and Newtyle. Scone contains the hamlet of Old Scone, the town of New Scone, the village of Stormontfield, and a small part of the burgh of Perth. Stormontfield is separately noticed, and the two Scones are described afterwards in this article. The chief residences are Scone Palace and Bonhard House, the latter the seat of Alexander Macduff, Esq. The Earl of Mansfield is the principal landowner; and 3 others hold each an annual value of £500 or upwards, 5 hold each between £500 and £100, and there are a considerable number of smaller amount.

The parish is in the presbytery of Perth and the synod of Perth and Stirling; and the living is worth £450 a year. The churches are noticed under the town. Under the school board the New Scone and Stormontfield schools, with respective accommodation for 311 and 59 pupils, had (1884) an average attendance of 225 and 29, and grants of £218, 12s. 6d. and £36, 2s. Valuation (1860) £12,329, 6s. 9d., (1885) £14,414, 3s. 6d. Pop. (1801) 1670, (1831) 2268, (1861) 2199, (1871) 2240, (1881) 2347, of whom 1125 were males and 1222 females, and 864 were in the landward part of the parish. Houses (1881) in landward part 161 inhabited, and 7 uninhabited.—*Ord. Sur.*, sh. 48, 1868.

The town of NEW SCONE is near the centre of the southern part of the parish, on the road from Perth to Blairgowrie, 2 miles NE of Perth. Occupying a fine airy position well sheltered on the E, it dates from the beginning of the present century, and its houses are mostly neat substantial buildings. There is a post office under Perth, with money order and savings' bank departments, a public hall and reading-room, a public school, and Established, Free, and U.P. churches. The public hall is a Romanesque building, erected in 1879-80 at the junction of Albert and Coupar-Angus roads, and the hall has accommodation for 400 persons. The school, Elizabethan in style, was opened in March 1876. The parish church, erected in 1804, and enlarged in 1834, has 638 sittings. The U.P. church, built in 1810, has 560 sittings. The Free church is small. Pop. of town (1841) 1364, (1861) 1403, (1871) 1477, (1881) 1483, of whom 692 were males and 791 females. Houses (1881) 324 inhabited, 20 uninhabited, and 4 being built.

The hamlet of Old Scone, 1⅛ mile to the WNW, may be said to have practically disappeared, but the site is interesting, from its connection with old Scottish history. In the early part of the 8th century we find Scone appearing as the capital of Pictavia, one of the four kingdoms into which the modern Scotland was then divided. Occupying a position between the two divisions of the Northern and Southern Picts, it seems to have become naturally the central point of the Pictish government, and in 710 it seems to have been here, at the Mote or Bote Hill that Naitan, King of the Picts, publicly 'renounced the error by which he and his nation had till then held, in relation to the observance of Easter, and submitted, together with his people, to celebrate the Catholic time of our Lord's resurrection,' and it was probably from this that the mound acquired its name of Caislen Credi or Castle of Belief. This change in the date of the keeping of Easter led to the expulsion of the Columban missionaries who had exercised ecclesiastical sway within the Pictish territories for over a century, and so caused the quarrel between the Picts and Dalriadic Scots that afterwards, in 844, led to the union of Dalriada and Pictavia under Kenneth Mac Alpin. Under Kenneth it remained the capital of the kingdom, and appears too as the place of keeping of the famous Stone of Destiny, which is traditionally said to have been brought by this monarch from Dunstaffnage. This myth represents it as having been the stone which Jacob used as a pillow at Bethel, but which, having passed into the possession of Scota, daughter of Pharaoh, who married Gaythelos, son of the King of Greece, and contemporary with Moses, was by her carried first to Spain, then to Ireland, and ultimately to Dalriadic Scotland, being all this time a sort of talisman for the owners, and held in high reverence as their *liafail* or stone of destiny, as set forth in the old rhyme—

> 'Ni fallat fatum, Scoti, quocunque locatum,
> Invenient lapidem, regnare tenentur ibidem;'

or, as Bellenden has rendered it—

> 'The Scottis sall bruke that realme, as natyve ground
> (Geif weirdis fayll nocht) quhair evir this Chiar is found.

Wyntoun, in telling the story, says that the stone was brought to Ireland † by Simon Brec, son of the King of Spain, and that it was afterwards by Fergus-Ercson transferred to Iona, and thereafter to Scone; while the *Rhyming Chronicle* makes Simon Brec the son of Milo,

* Called also the Bote Hill; the Gaelic name is *Tom-a-mhoid*, 'the hill where justice is administered.'

† It is a curious fact that while the Scottish stone was said to have been brought from Ireland, the Irish stone of Tara was, according to tradition, brought from Scotland.

King of Spain, who did not live till more than a thousand years after Pharaoh's time, and all the later chroniclers agree that the stone was finally transferred to Scone by Kenneth Mac Alpin, when he united the Picts and Scots under one sovereignty. Such is the rough tradition, but Dr Skene has shown that for its later more polished forms, and for the identification of the mystic stone with that at Scone, we are indebted to Baldred Bisset, who was one of the commissioners sent to Rome to plead the cause of Scottish independence before the Pope, and who was desirous of thus strengthening his cause. That the stone was looked on as mystical, and held in high reverence, is undoubted, though the reason cannot now be definitely ascertained. Dr Joseph Robertson supposed that it might have been brought from Iona, and was possibly the stone used by Columba as a pillow, but the block is of no rock found in that island, and is indeed a mass of dull reddish or purplish sandstone, with a few imbedded pebbles, and having as much resemblance to the sandstones of the neighbourhood as to any other deposits. Dr Skene thinks that in all probability it was a stone used by St Boniface—an Irish missionary who was concerned in the conversion of Naitan and his people to the Roman method of calculating Easter—as an altar, and hence the veneration; and he points out that a stone on which the kings of Munster were seated when crowned, was believed to be the stone altar used by St Patrick in his service after the conversion of the king of Cashel. There seems to be a difference between both the Scone and Munster stones, and those used in the common Celtic custom of inaugurating kings while they stood on some rock or large stone, for both of the former slabs were movable and were kept in churches. After the kingdom of Scone passed into the kingdom of Alban in A.D. 900, Scone still remained the capital, for in 906, when the Mote Hill was the scene of a solemn assembly where King Constantin and Cellach, Bishop of St Andrews, resolved on a union of the Pictish and Scottish Churches, it is spoken of as *regalis civitas*, and from this time onwards the same hill was frequently the meeting place of rough parliaments. In 1054 a battle was fought in the neighbourhood between the forces of Siward, Earl of Northumbria, and Macbeth. Siward was the uncle of Malcolm Ceannmor, and, anxious to place his nephew on his rightful throne, he 'went with a large army into Scotland, both with a naval force and a land force, and fought against the Scots, of whom he made great slaughter, and put them to flight, and the king escaped.' The struggle was, however, so keen, and so many of Siward's men were killed, that he had to retire, and Macbeth's rule over Scotia was maintained for other three years. From the reference to a naval force, Siward would seem to have brought ships, which operated along the Tay.

After the kingdom of Alban became the kingdom of Scotia, and still later, when Celtic finally passed into feudal Scotland, neither the importance of the place nor of its mystic stone diminished. 'No king,' says Fordun, 'was ever wont to reign in Scotland unless he had sat upon this stone at Scone;' and this may possibly have been so, though there is no contemporary evidence of the fact prior to the 12th century, when John of Hexham states that in 1153* Malcolm IV. was crowned here, and from this time onwards Scone was the regular place of coronation till the beginning of the reign of James IV. Subsequent to that time the only king who was crowned at Scone was Charles II. in 1651. Of most of the ceremonies no particulars have been recorded, but of that of Alexander III. a graphic account has been given by Fordun, and of that of Charles a full account is given in a thin quarto printed at Aberdeen in 1651, and reprinted by Dr Gordon in his *Monasticon* (London, 1875). The last king crowned seated on the mystic stone was Alexander III., as the relic was in 1296 carried off to London by Edward I., who, much given to relic worship, seems to have held it in as high esteem as the Scots themselves, and evidently regarded it as the palladium of Scotland. His first intention was to make for it a magnificent shrine, which was to serve as a coronation chair for the English kings, but this idea was abandoned in favour of that of a chair of bronze, and then of one of wood, which has been used as a coronation chair for all the English and British sovereigns since, and underneath the seat of which the stone still remains. Some doubt was at one time expressed as to whether this stone at Westminster is that formerly at Scone, because in the treaty of Northampton in 1328, it was stipulated that the relic should be given back. Complaint is, however, afterwards made that the stipulation had not been fulfilled, and there cannot be the slightest question as to the identity. The Abbey of Scone stood to the W of Old Scone on the site of the present palace. It was founded by Alexander I. in 1114 for Augustinian monks, whom he brought from the priory of St Oswald at Nastlay, near Pontefract in Yorkshire. The new foundation was dedicated by Alexander and his wife Sibylla to the Virgin, St Michael, St John, St Lawrence, and St Augustine; and it seems to have replaced an older church dating from the time of St Boniface, and dedicated to the Holy Trinity. During the Wars of Independence the monks of Scone were, like so many of the Scottish churchmen, thoroughly opposed to the English claims, and so we find their home destroyed by the English army in 1298, and Edward petitioning the Pope to take the Abbey out of the midst of a hostile population, while, later, Abbot Thomas was one of those who took part in the coronation of Robert Bruce and suffered in consequence, being sent to England as a prisoner. The Abbey possessed a precious relic in the head of St Fergus (*circa* 700), for which James IV. provided a silver case. From traces which have been observed of its foundations, the abbey wall is supposed to have enclosed an area of 12 acres. About 100 yards due E from the SE corner of the present palace is an old burying ground, and here in 1841 part of the abbey buildings were laid bare. The church is supposed to have stood here. About 70 yards N of this is the Mote Hill—'the hill of belief' of the chroniclers and the Mons Placiti of the *Regiam Majestatem*—with a flat area, on the top, of 100 by 60 yards. The Abbey buildings and the old palace, properly the house of the abbots, were destroyed by a mob from Perth in 1559. 'Some of the poore in houp of spoyle and sum af Dundie, to considder what was done passed up to the same Abbay of Scone; whairat the Bischopis servandis offended, began to threattene and speak proudlie; and as it was constantlie affermed one of the Bischopis sonis stogged throuch with a rapper one of Dundie, for because he was looking in at the girnell door. This brute noysed abrode, the town of Dundie was more enraged than befoir, who, putting thame selffis in armour, send word to the inhabitantis of Sanct Johnestoun, "That onles they should support thame to avenge that injurie that thai should never after that day concur with thame in any actioun." The multitud easelie inflambed, gave the alarme, and so was that Abbay and Palace appointit to saccage; in doing whairof they took no lang deliberation, bot committed the hole to the merciment of fyre; wharat no small nomber of us war offendit, that patientlie we culd nocht speak till any that war of Dundie or Sanct Johnestoun.' So complete was the destruction, that hardly any ruins even remained. The building of a new palace was begun by the first lay commendator, the Earl of Gowrie, and on his forfeiture the property was bestowed by King James VI. on David Murray of the house of Tullibardine, who became Baron Scone in 1605, and Viscount Stormont in 1621. He finished the palace and erected the old gateway 200 yards to the NE of the present mansion. The old abbey church having fallen, he also, in 1624, erected a parish church on the top of the Mote Hill. Of this only an aisle now remains, containing a magnificent marble statue of the first Viscount, and other family

* Dr Hill Burton's statement that Malcolm III. was crowned at Scone has been traversed by Dr Skene. See *Celtic Scotland*, vol. i., p. 431.

monuments. During the January of 1716 the Chevalier St George lived here for about three weeks 'in all the grandeur of an English King,' dining and supping alone and being served on the knee by the lord of the bedchamber in waiting. Prince Charles Edward also visited the house in 1745. After the succession of the Stormonts to the Mansfield title the old palace seems to have dissatisfied them, and a new mansion-house, the present Palace of Scone, was erected in 1803-8 at a cost of £70,000 from designs by William Atkinson of London. It is a castellated edifice, somewhat heavy and cumbrous, but contains many fine paintings, and the greater part of the old furniture and furnishings have been preserved, including a bed that belonged to James VI., and another, the hangings of which were worked by Queen Mary when a prisoner in Loch Leven Castle. The music gallery occupies the site of the old great hall where the coronation ceremonies took place. The situation is pleasant, on an extensive lawn sloping gently up from the Tay; and the well-wooded and beautiful grounds known as Scone Park stretch along the river for about 2 miles. Among many noble trees may be noticed Queen Mary's sycamore, and an oak and another sycamore, both planted by James VI. The Queen and Prince Albert here spent the night of 6 Sept. 1842. In the grounds is the old cross of Scone—a narrow pillar, 13 feet high, with a sculptured top—the original position of which was about 30 yards E of the ancient gateway already mentioned. Scone Palace is the seat of William David Murray, present and fourth Earl of Mansfield, ninth Viscount Stormont and Baron Scone (b. 1806; suc. 1840), who holds 48,039 acres, valued at £40,697, 16s. per annum, viz., 31,197 acres in Perthshire (£23,052, 6s.), 795 in Fife (£638, 8s.), 1705 in Clackmannanshire (£3617, 9s.), and 14,342 in Dumfriesshire (£13,389, 13s.). See COMLONGAN and SCHAW PARK.

See also the *Liber Ecclesie de Scon* (Edited by Cosmo Innes for the Bannatyne and Maitland Clubs in 1843); Skene's *Coronation Stone* (Edinb. 1860); his *Celtic Scotland* (Edinb. 1876-80); Urquhart's *History of Scone* (1884); chap. viii. of Thos. Hunter's *Woods and Estates of Perthshire* (Perth, 1883); and for the burning of the Abbey, Knox's *History of the Reformation*.

Scoonie, a parish on the S coast of Fife, containing the post-town and station of LEVEN. It is bounded N by Kettle and Ceres, E by Largo, SE by the Firth of Forth, S by Markinch (detached) and Wemyss, and W by Markinch and Kennoway. Its utmost length, from N to S, is 4⅝ miles; its breadth varies between 5 furlongs and 2¾ miles; and its area is 4286¼ acres, of which 184¾ are foreshore and 10½ water. The shore, 1⅝ mile in extent, is flat and sandy, and beyond the town is skirted by Scoonie Links. The river LEVEN flows 1¾ mile east-by-southward along all the southern boundary to Largo Bay; a burn, coming in from Kennoway, runs eastward and south-by-eastward through the interior to the bay; and a copious spring, called the Boiling Well, rises in a sandy flat a little way from the beach. The surface rises gradually northward to 200 feet near Springfield, 380 near Toddy Bridge, and 600 near Kilmux Wood in the extreme N; and the higher grounds command an extensive and brilliant view of the Firth of Forth and the Lothians. Beds of coal of various thickness lie beneath all the surface, and were formerly worked; and a bed of ochre, 4 feet thick, on the estates of Durie and Aithernie, has furnished considerable quantities of ochre for exportation. The soil is variable; but nearly nine-tenths of the entire area are in tillage, whilst over 260 acres are under wood. A tumulus on the Aithernie estate in 1821 was found to contain about twenty stone coffins. The chapman-scholar, Jerome Stone (1727-57), was the son of a Scoonie mariner. Mansions, noticed separately, are DURIE, KILMUX, and MONTRAVE; and 6 proprietors hold each an annual value of £500 and upwards, 11 of between £100 and £500. Scoonie is in the presbytery of Kirkcaldy and the synod of Fife; the living is worth £426. The old parish church, in the centre of the burying-ground, ¼ mile distant from Leven, is now reduced to a fragment, which serves as the family vault of the Durie property. The present churches have been described under Leven; but we may add that an organ was placed in the parish church in August 1884. Two public schools, Leven and Smithy Green, with respective accommodation for 916 and 65 children, had (1884) an average attendance of 510 and 29, and grants of £460, 5s. and £29, 2s. Valuation (1856) £11,824, 7s., (1885) £19,044, 0s. 11d. Pop. (1801) 1681, (1831) 2566, (1861) 3257, (1871) 3178, (1881) 3730.—*Ord. Sur.*, sh. 40, 1867.

Scotlandwell. See PORTMOAK.

Scotsbrig, a farm in Middlebie parish, Dumfriesshire, 3 miles NE of Ecclefechan. It became the home of the Carlyle family in 1826.

Scotsburn. See LOGIE-EASTER.

Scotscraig, a large substantial mansion of 1817, in Ferry-Port-on-Craig parish, NE Fife, 1 mile SW of Tayport. The estate at an early period belonged to the bishops of St Andrews, by one of whom it was feued during the first half of the 13th century to Sir Michael Scott of Balwearie, father of the famed Sir Michael Scott, with whose descendants the lands for some time continued. It was in consequence of this that they came to be denominated Scotscraig. From the family of Scott, Scotscraig came by purchase to Durie of that ilk, from whom it passed to the Ramsays, ancestors of the Earl of Dalhousie. It afterwards belonged to the Buchanans, then to the Erskines; and during the reign of Charles II. the whole estate became the property of Archbishop Sharp, from whose successors it was purchased by Mr Alexander Colville, the representative of the Lords Colville of Culross. From this family the lands were afterwards purchased by the Rev. Robert Dalgleish, D.D., who was minister and proprietor of the whole parish. The present proprietor is Vice-Admiral William Heriot-Dougall (b. 1819; suc. 1851), who holds 2550 acres in Fife, valued at £2725 per annum.—*Ord. Sur.*, sh. 49, 1865.

Scots Dyke, The, an old ditch and embankment 3⅝ miles in length, forming part of the march-line between England and Scotland. It struck off abruptly from the Esk at a point 4 miles to the N of Longtown, and ran W to the banks of the Sark, which, flowing southward to the Solway Firth, from the point of contact with the Scots Dyke to its efflux in the Solway forms the boundary of the two countries. The small district situated S of the Scots Dyke, and bounded on the E by the Esk and on the W by the Sark, used formerly to be known as the Debatable Land, and was claimed by both kingdoms.—*Ord. Sur.*, shs. 11, 10, 1863-64.

Scotstarvet Tower, a square, battlemented tower in CERES parish, Fife, 2¼ miles S by W of Cupar. Standing on an eminence, it is 24 feet square, and 50 to 60 feet high, commands a fine view, and itself is widely conspicuous.—*Ord. Sur.*, sh. 40, 1867.

Scotstown, a village of Sunart district, Argyllshire, 2 miles N of Strontian.

Scourie, a village in EDDRACHILLIS parish, W Sutherlandshire, at the head of a small bay of its own name, 43½ miles NW of Lairg, under which it has a post office, with money order and savings' bank departments, and with which it communicates by a daily mail-gig. The township, except where it looks out upon the bay, is quite surrounded by an amphitheatre of rugged ledges of rock; and the land is comparatively verdant and arable, in fine contrast to the sterile and rocky surface of the mountain-screens. Scourie Bay is 7⅜ furlongs in length by 5 across the entrance, and opens upon the romantic island of Handa. In the 16th century a branch of the Mackays took possession of the south-western part of what came to be called Lord Reay's Country, and, adopting Scourie as the seat and centre of their influence, assumed the designation of the Mackays of Scourie. One of this race was Lieutenant-General Hugh Mackay, the celebrated commander-in-chief in the reign of William and Mary. He was to have been ennobled by the title of Earl of Scourie, but lost favour at court through the intrigues of his rival, Mackenzie of Cromarty.—*Ord. Sur.*, sh. 107, 1881.

Scour-na-Lapaich. See MONAR, LOCH.

Scrabster. See THURSO.

Scrape, The, a rounded mountain (2347 feet) on the mutual border of Manor and Drummelzier parishes, Peeblesshire, 7 miles SW of Peebles. It consists of greywacke veined with quartz, and commands an extensive and interesting prospect. Along its top are traces of a road which is supposed to have been Roman, and which probably connected the camp at Lyne with the great road from Carlisle up Annandale and down Lanarkshire.—*Ord. Sur.*, sh. 24, 1864.

Scresort, Loch. See RUM.

Scriden Rocks. See ARRAN.

Scroggiehill, a village in Methven parish, Perthshire, 4 miles WNW of Perth.

Scuir of Eigg. See EIGG.

Scullamie. See KYLE OF TONGUE.

Seacliff House, a mansion in Whitekirk parish, Haddingtonshire, near the coast, 4½ miles E by S of North Berwick. Scottish Baronial in style, it was rebuilt by the late Mr Sligo, and enlarged by John Watson Laidlay, Esq., who acquired the estate in 1850, and holds 720 acres in the shire, valued at £2075, 17s. per annum.—*Ord. Sur.*, sh. 41, 1857. See J. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Seafield Tower. See KINGHORN.

Seafield Tower, a mansion in Ardrossan parish, Ayrshire, near the coast, 1 mile N by W of the town. Built in 1820, and greatly enlarged and improved in 1858, it is now a château-like edifice in a pleasing combination of the Scottish Baronial, Jacobean, and Italian styles. In 1881 it was purchased for £7050 by Arch. Douglas Bryce Douglas, Esq.—*Ord. Sur.*, sh. 22, 1865. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Seaforth, Loch, a projection of the sea on the E coast of the island of Lewis. It is 3¼ miles wide at the entrance, and, striking north-westward for 8½ miles, diminishes gradually to a breadth of 1 mile; it then bears 5½ miles north-north-eastward, its breadth contracting from 2⅝ miles to ¼ mile, and enbosoms to the S an island, Eilean Shithford (1⅛ mile × 6½ furl.; 600 feet high); and it finally goes off in two arms—1 mile westward and 3 miles eastward, with a maximum breadth of ½ mile. Over the first 8½ miles it divides Lewis from Harris, and over the rest of its length it penetrates the Lewis parish of Lochs. The mountains around its entrance rise to a great height, and, together with much grandeur of outline, form groups of highly-picturesque composition. In all the narrow or central and upper part, the loch, being environed with lofty ground, and forming a stupendous natural canal, is gloomy, sequestered, and silent; and in its lower part, though frequented by shipping, it is subject, from the clefts of the surrounding mountains, to sudden squalls and gusts, which render its anchorage not altogether safe. At a shoal, 3½ miles above Eilean Shithford, the current of a spring tide runs at the rate of 8 miles an hour, and makes a noise which, in calm weather, can be heard at a distance of several miles. This shoal cannot be passed by boats except near high water. Seaforth gave the title of Earl to a branch of the family of Mackenzie, created Baron Mackenzie of Kintail in 1609, and Earl of Seaforth in 1623. The earldom became attainted, in 1716, in the person of William, the fifth Earl, whose heir-male is Mr Mackenzie of Allangrange.—*Ord. Sur.*, sh. 99, 1858.

Seal Island. See ELLÁN-NA-RON.

Seamab Hill. See MUCKHART.

Sea Park, a good modern mansion, with beautiful grounds, in Kinloss parish, Elginshire, 1¼ mile W by N of Kinloss station, and 2½ miles NE of Forres. The estate belonged to the Ellisons from 1574 till 1800, and in 1838 was purchased by the late John Dunbar, Esq.—*Ord. Sur.*, sh. 95, 1876.

Seaton. See SETON.

Seggieden, a mansion, with finely wooded grounds, in Kinfauns parish, Perthshire, near the left bank of the Tay, 4 miles ESE of Perth. Its owner, Mrs Drummond Hay (suc. 1854), holds 800 acres in the shire, valued at £2495 per annum.—*Ord. Sur.*, sh. 48, 1868.

Seil, an island of Kilbrandon and Kilchattan parish, Argyllshire, lying 3½ miles S by W of Kerrera, and 4 SE of Mull. It is separated on the E by a very narrow strait from the mainland district of Nether Lorn; on the S by sounds only 2 or 3 furlongs broad from Torsa and Luing; and on the W by sounds of ½ mile and 1 mile in breadth from Easdale and Sheep Isle. It measures 4¼ miles in length from N to S, and 2¼ miles in extreme breadth; but is much indented by the sea, and has a very irregular outline. Its area is 3820⅓ acres, of which 433⅓ are foreshore and 2580⅞ moorland. The surface is disposed in three parallel ridges, two intervening valleys, and a belt of plain along part of the shore. The northern ridge, which is the highest and most rugged, has an altitude of upwards of 800 feet, and presents to the sea on the N side of the island a series of naked precipices. The middle ridge is prolonged more decidedly than the former, and in a north-easterly direction; it does not acquire an elevation of more than 400 feet; and, though in many parts presenting faces of bare rock, it descends at each end to the sea in flat and verdant shores. The southern ridge is low and narrow; it extends from side to side of the island in the same direction as the former; it is distinguished, even at a distance, by its grey colour and its numerous protrusions of bare rock; and it is succeeded on the SE by a flat shore, much indented, but verdant and fertile. Clay slate, in several varieties, constitutes the larger part of the island; but, in consequence of the immediate vicinity of the superior slate of Easdale, it is not very extensively worked. The soil, wherever the form of the ground admits of cultivation, is good. Several summits of the ridges command pleasant views of the intricate channels and numerous islands along the coast of Lorn, and of the distant mountains of Mull and Jura. The E side of the island, and the confronting land in Lorn, form, with the intervening strait, a series of very rich close landscapes. The strait somewhat resembles the famed Kyles of Bute, but is more isleted, more romantically narrow, and rifer in those flexures of channel and projections of land which seem to prohibit farther progress. The shores, on the Seil side, now lofty and now low, are finely variegated with arable fields, green meadows, waving trees, and rugged rocks; and on the Lorn side, they are high, extensively sheeted with hanging wood, and romantically varied with ornamental culture, wood-embosomed cliffs, and sharply receding bays and creeks. The strait between these shores is at least 3 miles in length; and over most of this distance it rarely exceeds 200 yards in breadth, whilst in one place towards the N it contracts for a considerable way to a breadth of only 50 or 60 yards. The tidal stream, running with considerable velocity through this passage, generally wears the appearance of a great inland mountain river; and it betrays its marine connections only at low water when the rocks look up with a shaggy dress of seaweed. The water is deep enough at half tide to admit the passage of the boats of the country; and across the narrowest part of the strait strides a bridge of one large arch, erected towards the close of last century, 78 feet in span and 26 above high-water mark. Lord Breadalbane owns all the island, except the estate of Ardincaple, which was sold, with Sheep Island, in 1881, for £21,000. Pop. (1861) 724, (1871) 731, (1881) 661, of whom 330 were females, and 589 were Gaelic-speaking.

Selkirk, a post and market town, a royal and parliamentary burgh, and the county town of Selkirkshire, is situated on a rising ground flanking a fine haugh on the right bank of Ettrick Water, 6¼ miles S by W of Galashiels, 7 SW of Melrose, 11 N by W of Hawick, 22 ESE of Peebles, and 38 SSE by road and 40 by rail from Edinburgh. It stands at the terminus of a branch line, 6¼ miles long, from Galashiels, formed under an act of 1854, and amalgamated with the North British in 1859. Its site on an eminence, rising from

400 to 619 feet above sea-level, is eminently favourable for sanitary arrangements; and its environs comprise the beautiful pleasure-grounds of Haining and picturesque reaches of Ettrick and Yarrow Waters to Oakwood Tower and Newark Castle. At the beginning of the present century the town presented the appearance of an ill-built, irregular, and decaying place, fast hastening to extinction; but since then it has suddenly revived, has undergone both renovation and extension, and is now a pleasant, prosperous, and comparatively ornate place, including various lines of new thoroughfares, elegant private residences, several good public buildings, and a number of busy factories. The plan of Selkirk is far from being regular. A spacious triangular market-place occupies the centre of the town; and thence the chief streets branch off in different directions. On the shortest side of the market-place is the town-hall, a neat modern edifice surmounted by a spire 110 feet high. The county buildings, occupying a site on the side of the road leading to Galashiels, were erected in 1870, and contain a handsome courtroom with an open timber roof, and well-planned apartments for various official purposes. Two portraits of George III. and his Queen were presented by a Duke of Buccleuch. A tunnel under the intervening street communicates with the sunk floor of the county prison, which stands opposite, and which was altered and enlarged in 1865-66 at a cost of £2000. In the open area of the market-place stands Handyside Ritchie's monument to Sir Walter Scott, erected by the gentlemen of the county in 1839. The statue, 7½ feet high, represents the great author in his robes as sheriff of Selkirkshire, and is raised on a pedestal 20 feet high. Another monument, by Andrew Currie, was erected in 1859 to Mungo Park, the celebrated African traveller. The ancient market-cross and the tolbooth, as well as the stalls of the old flesh market, also stood in the market-place; but all these have now disappeared. In 1884 a marble tablet was erected in the West Port to mark the site of the old Forest Inn, where, on 13 May 1787, Burns is believed to have written his 'Epistle to Willie Creech.' The railway station stands in the haugh at the foot of the rising ground occupied by the town; and the ascent from it, though short, is steep and fatiguing. A bridge, carrying the line across the Tweed immediately below the influx of Ettrick Water, was originally a wooden structure; but after the winter of 1877 it was reconstructed in a more substantial form, with six piers and with iron girders.

The present parochial church was built in 1862, and contains 1100 sittings. The living is worth £461. A chapel of ease was opened at Heatherlie in Feb. 1877, and cost £3856. Early Decorated in style, it is a cruciform and apsidal structure, containing 600 sittings. In Jan. 1885 it was raised to *quoad sacra* parish status. The Free church was built soon after the Disruption, and contains 700 sittings. There are two U.P. churches in the town. The first U.P. congregation occupy a new church, opened in September 1880, with 850 sittings, and a hall behind. It is in the Early Gothic style, with a spire 130 feet high, and cost about £5000. The West U.P. church has 490 sittings. The E.U. chapel contains 130 sittings. St John's Episcopal church, with 150 sittings, is an Early English edifice of 1869; and the Roman Catholic church of Our Lady and St Joseph contains 250 sittings, and was erected in 1866. Four schools—Grammar, Knowe Park, Burgh, and Roman Catholic—with respective accommodation for 378, 485, 250, and 124 children, had (1884) an average attendance of 282, 158, 297, and 57, and government grants of £215, 17s., £129, 19s., £215, 9s., and £31, 18s. 6d. Since these returns were made the Grammar School staff has been transferred to Knowe Park school, which cost £3763, and was opened on 4 Jan. 1882; whilst the Grammar and Burgh schools, now designated Burgh school, have been placed under one head-master.

Selkirk has a post office, with money order, savings' bank, and telegraph departments, branches of the British Linen (1825), the National (1864), and the National Security Savings' Banks (1838-39), offices or agencies of 21 insurance companies, and 5 hotels. Among the miscellaneous institutions and associations of the burgh are a subscription library, founded in 1772; a mechanics' institute, library, and reading-room, established in 1853; a Young Men's Mutual Improvement Society (1861), a choral society (1872), a cottagers' horticultural society (1852), a farmers' club (1806), an association for the improvement of domestic poultry (1863), a pastoral society for the improvement of live stock (1819), the Ettrick Forest Club (1788), a dispensary (1851), a clothing society (1854), two friendly societies, a weavers' provident society (1864), a provident building society (1859), a Freemasons' lodge, reorganised in 1864; curling, cricket, two bowling, and golfing clubs (respectively founded in 1850, 1852, 1855, 1875, and 1882); a total abstinence society, and various religious and philanthropic associations. A Liberal newspaper, the *Southern Reporter* (1855), is published in the town every Thursday. The *Selkirk Advertiser*, containing chiefly advertisements, is published every Saturday, and distributed gratis in the town and neighbourhood. The weekly market day is Wednesday. The anniversary festival known as the Common Riding is on the Friday following that of Hawick. Annual fairs are held as follows:—Herds and hinds hiring on the first Wednesday of March, servants on 5 April and 31 Oct., shearers on 15 July, and Yule on 19 Dec. There is a general holiday on the first Saturday in August.

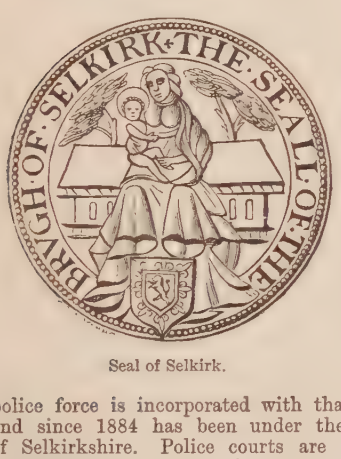
Industries.—The present staple manufacture of Selkirk is woollen goods—tweeds, tartans, shawls, and such articles—similar to those produced at Galashiels. This manufacture was introduced about 1836, has since steadily increased in importance, and is now carried on in large factories employing very many hands. Less than twenty years ago, according to a careful estimate, the number of power-looms in Selkirk was 181; hand-looms, 97; carding-machines, 32 sets: spindles in self-acting mules, 15,612; do. in hand-mules, 12,260; do. in throstles for twisting, 1726; persons employed, 1032. Between 860,000 and 870,000 lbs. of wool were supposed to be then annually consumed; between £28,000 and £29,000 paid in wages; while the annual turn-over was about £220,000. There can be no doubt that these averages have very largely increased; but the manufacturers, like those of Galashiels, are somewhat averse to taking the public into their confidence on the subject of their business operations. There are now 3 mills engaged in spinning woollen yarns, 1 in spinning Cheviot and Saxony yarns, and 6 in the manufacture of tweeds and tartans, etc. The other industrial establishments are of less importance; they include one engineering and millwright work, a saw-mill, a corn-mill, and the usual commercial institutions of a country town. In former times a principal employment of the inhabitants was the making of single-soled shoon, 'a sort of brogues with a single thin sole, the purchaser himself performing the further operation of sewing on another of thick leather.' So prominent was this craft as to give the name of 'souters' (shoemakers) to the whole body of burgesses; while, in conferring the freedom of the burgh, one of the indispensable ceremonies consisted in the new-made burgess dipping in his wine and then passing through his mouth in token of respect to the souters four or five bristles, such as shoemakers use, which were attached to the seal of the burgess ticket, and which had previously passed between the lips of the burgesses present. 'The ceremony,' however, writes Mr T. Craig Brown, 'is comparatively modern, and I am much inclined to blame Sir Walter Scott for its institution.' He himself was made a 'Souter o' Selkirk' in this sort, but in the case of Prince Leopold of Saxe-Coburg (1819) the custom was omitted. Even in the middle of last century the shoemakers of Selkirk were so numerous as to furnish more than one-half of the 6000 pairs of shoes demanded from the magistrates of Edinburgh by the Highland army in 1745. But since then the glory of the craft has departed, and the souters are not more conspicuous in Selkirk than in any other

country town. The insignia, documents, and books of the 'Craft of Cordiners,' as the souters called themselves, are in possession of Mr T. Craig Brown, at whose house (Woodburn) they may be seen. A song very familiar in the S of Scotland has for its first verse :

'Up wi' the souters o' Selkirk
And down wi' the Earl o' Home!
And up wi' a' the braw lads
That sew the single-soled shoon!'

These lines, which undoubtedly relate to a football match between Lord Home's men and the souters, have given rise to much literary controversy. Scott, who gives other two verses in his *Minstrelsy of the Scottish Border*, seems inclined to refer them to the gallantry of the men of Selkirk at Flodden, and to the alleged poltroonery of Lord Home on the same occasion. 'The few survivors,' he says, 'on their return home, found, by the side of Ladywood Edge, the corpse of a female, wife to one of their fallen comrades, with a child sucking at her breast. In memory of this latter event, continues the tradition, the present arms of the burgh bear a female, holding a child in her arms, and seated on a sarcophagus, decorated with the Scottish lion, in the background a wood.' Certain at least it is that the figures in the burgh arms are those of the Virgin and Child. Nor is the legend much more tenable that a weaver of Selkirk greatly distinguished himself in the fight, and captured an English flag, though this so-called Flodden flag is now in the custody of a gentleman in the town.

Selkirk was made a royal burgh in the reign of David I. It is governed by a provost, 2 bailies, a dean of guild, a treasurer, and 10 councillors. Prior to 1871 the burgh adopted portions of the General Police and Improvement Act of 1862. The corporation revenue in 1883-84 was £1837; and in 1885 the municipal constituency was 1157, of whom 257 were females. The police force is incorporated with that of the county, and since 1884 has been under the chief constable of Selkirkshire. Police courts are held as occasion requires; as also justice of peace courts for the whole county. Sheriff courts for the county and sheriff small debt courts are held weekly during session; small debt cases, ordinary cases, and cases under the Debts Recovery Act, on Fridays. By the Reform Act of 1832 Selkirk was thrown into the county for parliamentary purposes, but under the Act of 1868 it now unites with Galashiels and Hawick in returning one member to parliament. The parliamentary burgh is coterminous with the royal burgh, and has a constituency of 900. Extensive works in connection with the water supply were undertaken in 1866-67; and in 1876 the sewerage having been declared inefficient in a special report prepared at the instance of the board of supervision, a complete drainage system was introduced, the sewage being dispersed by irrigation. Valuation of real property in the burgh (1851) £9904, (1876) £15,433, (1885) £22,898. Pop. (1831) 1880, (1861) 3695, (1871) 4640, (1881) 6090, of whom 3251 were females, and 5977 were in the police burgh. Houses (1881) occupied 1153, vacant 64, building 3.



Seal of Selkirk.

History.—Shielkirk, or the *kirk* planted beside the *shiels* of herdsmen and hunters in the Forest, is the modern equivalent of *Scheleschirche*, the earliest spelling of the name on record. In 1113 Earl David—afterwards David I.—founded at Selkirk a Tyronensian abbey. The erection of a royal castle was probably posterior to that of the church, as he speaks of a road 'between the castle and the old town;' but after 13 years the abbey was removed for convenience to Kelso; and the distinction between Selkirk Abbatis, or the village beside the abbey, and Selkirk Regis, or the village beside the castle, gradually disappeared as the places merged in one. David I. seems to have preferred Roxburgh to Selkirk as a place of residence; but the latter castle was frequently inhabited by William the Lyon, who dated several of his charters from it. Alexander II. and Alexander III. also spent some time at Selkirk; but after the accession of Robert I. it seems to have ceased to be a royal residence, though still regarded as a town of the king's demesne. Selkirk made some figure in the war of succession; and the gallantry of its citizens at the battle of Flodden has already been alluded to. James V. recognised the claims of the burgh by granting 1000 acres of Ettrick Forest to the corporation; and when the town, a little later, was burned by the English, the king gave timber from his forest to rebuild it. With the battle of Philiphaugh, also in 1645, Selkirk had intimate connection; and in 1745 it was the scene of some skirmishing with the foragers of the Pretender's army, on its way to England. Selkirk gives the title of Earl in the peerage of Scotland to a branch of the powerful family of Douglas, which at one time held extensive sway in the Forest. See St Mary's Isle.

The *quoad civilia* parish of Selkirk comprises a main body (chiefly in Selkirkshire but partly in Roxburghshire) and a detached portion. The main body is bounded N by Stow, NE by Galashiels, E by Galashiels and Bowden, SE by Lilliesleaf and Ashkirk, SW by Kirkhope, and W and NW by Yarrow. The detached portion lies $1\frac{3}{4}$ mile S of the nearest point of the main body, and is bounded by Ashkirk, Roberton, and Kirkhope. The greatest length of the main body, from ENE to WSW, is $7\frac{3}{4}$ miles; its breadth varies between $4\frac{1}{2}$ and $7\frac{7}{8}$ miles; and the area of the entire parish is 22,895¼ acres, of which 1358⅛ are in Roxburghshire, 1430⅝ belong to the detached portion, and 316 are water. The surface of the parish is all of a hilly character; but, from the loftiness of its base and the peculiarities of its contour, presents less of an upland appearance than other districts much less hilly in reality. The Tweed flows $4\frac{5}{8}$ miles east-south-eastward along all the northern and north-eastern boundary; Ettrick Water flows $7\frac{7}{8}$ miles north-eastward either through the interior or along the Kirkhope and Galashiels boundary to the Tweed; and Yarrow Water runs $2\frac{3}{4}$ miles east-north-eastward along the boundary with Yarrow parish, then $3\frac{3}{8}$ south-eastward through the interior to the Ettrick. The ground in the detached portion sinks along Todrig Burn to less than 800 feet above sea-level, and rises to 1257. In the NE corner of the main body, at the influx of Ettrick Water to the Tweed, the surface declines to 397 feet. That portion of the parish to the right of the Ettrick rises rather in verdant swells and undulations than in hills; that between the Ettrick and Yarrow is largely occupied with the Duke of Buccleuch's wooded park of Bowhill; and that between the two last-named streams and the Tweed is mainly lofty and heath-clad. The highest points are Foulshiels (1454 feet), South Height (1493), Broomy Law (1519), Three Brethren (1523), and Fastheugh Hill (1645). The prevailing rocks are greywacke, greywacke slate, and clay slate. The soil, for the most part, is light and dry. The mansions are Bowhill, Haining, Sunderland Hall, Broadmeadows, Philiphaugh, and Yair. All of these are noticed separately, as also are Newark Castle, the scene of Scott's *Lay of the Last Minstrel;* Oakwood Tower, the traditional residence of Sir Michael Scott, but built hundreds of years after the Wizard had died; the battlefield of Philiphaugh; Carterhaugh, the scene of the ballad of *Tamlane;* and Foulshiels, where Mungo Park was born. Besides Park, Selkirk counts among her distinguished sons Andrew Pringle, Lord Alemoor, an 18th century judge, famous for learning and eloquence;

George Lawson, D.D. (1749-1820), professor of theology to the Associate Synod, a man of considerable learning and of saintly character; and the living poets, Andrew Lang and J. B. Brown ('J. B. Selkirk'). The town is the seat of a presbytery in the synod of Merse and Teviotdale. About one-third of the *quoad civilia* parish is now disjoined *quoad sacra*, forming the new parish of Heatherlie and a small part of Caddonfoot. Selkirk presbytery comprises the *quoad civilia* parishes of Ashkirk, St Boswells, Bowden, Ettrick, Galashiels, Kirkhope, Lilliesleaf, Maxton, Melrose, Roberton, Selkirk, and Yarrow; and the *quoad sacra* parishes of Caddonfoot, Galashiels West Church, Heatherlie, and Ladhope. The Free Church has also a presbytery of Selkirk. Under the landward school board, Selkirk public school, with accommodation for 200 children, had (1884) an average attendance of 187, and a government grant of £156, 9s. 9d. Landward valuation (1865) £12,684, (1885) £15,362, of which £13,981 was for the Selkirkshire portions. Pop. (1801) 2098, (1831) 2833, (1861) 4739, (1871) 5633, (1881) 7432, of whom 36 were in the Roxburghshire portions.—*Ord. Sur.*, shs. 25, 17, 1865-64.

Selkirkshire or **Ettrick Forest**, an inland shire in the S of Scotland, and one of the Border counties, lies between 55° 22′ 20″ and 55° 41′ 54″ N lat., and between 2° 47′ 40″ and 3° 18′ 46″ W long. It is bounded on the N by Peeblesshire and Midlothian, NE, E, and SE by Roxburghshire, SW by Dumfriesshire, and W by Peeblesshire. Its greatest length, from the source of the Ettrick on the SW to the confluence of the Tweed and Gala on the NE, is 28 miles; its greatest breadth, from Roberton Kirk on the SE to where Haystoun Burn leaves the county on the NW, is 17 miles; and its total area is 260 square miles or 166,524 acres, of which 1997 are water. In point of size Selkirkshire is twenty-sixth among the Scottish counties; and in point of rental and population it is twenty-seventh. Its outline is very irregular, but its shape may be described as roughly resembling that of Ireland, with a deep indentation on the NW. Besides the main body, the county includes two small detached portions, embedded respectively in Roxburghshire and Peeblesshire. From the point on the NE where the Tweed leaves the county, the boundary line runs with a south-westerly slope, at first along the bank of the Ettrick, but afterwards more irregularly to Borthwick Water in Roberton parish. Thence after describing a considerable loop it runs pretty constantly westwards along the N of Dumfriesshire, by Crib Law, Moodlaw Loch, and Gair Hill, to Whin Fell, where it trends tolerably due N by Herman Law, St Mary's Loch, Glenrath Heights, and Hundleshope Heights, to the junction of Waddenshope and Glensax Burns, from which point it makes a wide irregular sweep to the SW to Glengaber, and thence NW to the Tweed opposite Gatehope Burn, forming a kind of irregularly shaped arc, divided into three parts by two narrow peninsulas, the W extremities of which just touch the Tweed, which forms the chord. The bounding line follows the Gatehope Burn NE from the Tweed for some distance, then sweeps round towards the NW, and from the source of Caddon Water runs in a comparatively straight line SW till it strikes the course of the Gala, which continues to bound the shire till we reach the Tweed at the point at which we began to trace the outline.

Selkirkshire forms parts of the southern Highlands of Scotland, and lies from 300 to 2433 feet above sea-level. It rises in a continuous succession of uplands, and, excepting a narrow portion on the E side, is nothing more than a congeries of heights intersected by gorges, glens, and narrow bays. The pastoral nature of the country causes human habitations to be few and far between, so that an air of solitary stillness seems to hang over the verdant hills. Between the Tweed and Yarrow the hills are mostly heather-covered, but elsewhere they are more grassy.

Hills.—The positions of the chief heights are most conveniently indicated with reference to the rivers and river basins. In that part of the shire N of Tweed and W of Gala, the chief summits are Gala Hill (904 feet), Neidpath Hill (1203), Mossilee Hill (1264), Meigle Hill (1387), Great Law (1666), Ferniehurst Hill (1643), Deaf Heights (1844), Redscar Law (1837), Seathope Law (1778), and Windlestrae Law (2161). In the parts of Yarrow and Selkirk parishes N of the Yarrow are Linglee Hill (1123 feet), Three Brethren (1523), Foulshiels Hill (1454), Ashiesteil Hill (1314), Elibank Law (1715), Lewinshope Rig (1320), Minchmoor (1856), Stake Law (2229), Blackhouse Heights (2213), Deer Law (2064), Plora Craig (1212), Dun Rig (2433; the highest point in the county), Hundleshope Heights (2249), and Birkscairn (2169). In the parts of the parishes of Ettrick, Yarrow, and Selkirk, between the Yarrow and Ettrick, are Black Andrew (1364 feet), Newark Hill (1450), Fastheugh Hill (1645), Faulds-hope Hill (1532), Sundhope Height (1684), Bower-hope Law (1569), Wardlaw Hill (1951), and Herman Law (2014). In the SW of Ettrick parish rise Bodsbeck Law (2173 feet), Capel Fell (2223), Wind Fell (2180), Ettrick Pen (2269), Blacknowe (1806), and Gair Hill (1601). In Selkirk and Yarrow parishes E of the Ettrick, and in Ashkirk, are Stand Knowe (1528 feet), Dun Knowe (1459), Dodhead Mid Hill (1118), Shaw's Hill (1292), Bleak Law (1215), Bellendean Rig (1144), The Craigs (1238), Whiteslade Hill (1134), Cavers Hill (1209), Hutlerburn Hill (1178), Huntly Hill (1146), and Moat Hill (744). Firestane Edge (1155 feet), Hangingshaw Hill (1044), Blackcastle Hill (908), are between the Ale and Borthwick; Philhope Hill (1121) and Calfshaw Head (1320) between the Borthwick and Teviot.

Rivers.—The largest river in Selkirkshire is the Tweed, which for 10 miles flows across the N part of the county, from its confluence with the Gatehope Burn, to the junction with the Gala, and divides the Selkirkshire portion of Stow and Innerleithen parishes, and Galashiels parish on the N, from Yarrow and Selkirk on the S. At two points, as has been noticed, Yarrow parish sends out narrow peninsulas which just touch the S bank of the river. Within the bounds of Selkirkshire the Tweed receives on its right bank the Glensax or Haystoun Burn, Kirkburn, Quair, Plora, Bold, and Glenkinnon Burns; and on the left, Gatehope Burn, Caddon Water, and the Gala. The Quair receives the Newhall and Fingland Burns as affluents. But the two specially Selkirkshire rivers are the Yarrow and the Ettrick, both flowing diagonally through the county from SW to NE in parallel courses till they meet at Carterhaugh, about 2 miles above Selkirk, whence the united stream, under the name of Ettrick Water, flows north-eastward to the Tweed. The Yarrow rises in the SW corner of the county, and flows through the Loch of the Lowes and St Mary's Loch, at the NE end of which begins the true Yarrow of Scottish song. Its whole course of 25 miles towards the NE through the 'dowie dens o' Yarrow' is studded with scenes of historic and romantic interest. It has about forty affluents, of which the chief on the right bank are the Altrieve and Sundhope Burns, and on the left, the Megget (from Peeblesshire), Kirkstead, Dryhope, Douglas, Mount Benger, Catslack, Deuchar, Lewinshope, and Hangingshaw Burns. The Ettrick, perhaps only second to the Yarrow in Scottish song, rising on Capel Fell, flows NE for 32§ miles before it joins the Tweed a little below Sunderland Hall. On the left bank it receives the Rangecleuch, Kirkhope, Tushielaw, Crosslee, Birkindale, Singlie, and Philiphaugh Burns; and on the right, Tima Water (receiving Dalgleish and Glenkerry Burns), Rankleburn, with its tributary the Buccleuch Burn, Deloraine, Baillie, Huntly, and Windy Burns. After these rivers the Gala, in the N, ranks next in importance, which, flowing from Midlothian, forms the W boundary for about 5 miles. It is joined by the Heriot, Armit, and Lugate. In the SE of Selkirkshire, the Ale Water, taking its rise in Roberton parish, flows through Alemoor Loch into Roxburghshire. Its four Selkirkshire tributaries, each flowing from a separate little loch, are the Byrelee Burn from Kingside Loch; Wilson Burn from Hellmoor Loch; Todrig Burn from Shaws Loch;

SELKIRK
SHIRE.
British Miles.
Longitude West 3° from Greenwich
PEEBLES
River Tweed
Yarrow Water
Ettrick Water
Ettrick Forest
Inverleithen
Innerleithen
Galashiels
SELKIRK
Yarrow Parish
Ettrick Parish
Roberton Parish
Selkirk Parish
Part of Peebles Ps
Part of Selkirk Ps
Part of Ashkirk Ps
Part of Stow Ps
Part of Selkirk Shire
St Mary's Loch
Minch Moor
Longlaw
Ettrick Pen
Roberton Kirk
Thirlestane
Haystek
Dumfries Shire

and Blindhaugh Burn from Akermoor Loch. Borthwick Water, which skirts a short reach of the SE boundary, receives from the county, on its left bank, Wolfcleuch, Dirthope, and Hoscote Burns.

Lochs.—The lochs of Selkirkshire, though numerous, are small. St Mary's Loch, at the middle of the W boundary, is by far the most famous. This clear and calm sheet of water, 3 miles long and less than 1 mile broad, is beautifully situated in a sequestered valley, overlooked by rounded verdant hills, which impart a striking air of solitude to the scene. Sir Walter Scott, Hogg, the Ettrick Shepherd, and Wordsworth have each celebrated its beauty in their poetry. Separated from St Mary's by only a narrow isthmus is the little Loch of the Lowes, 1 mile long and ¼ mile broad. The district about these lochs is inseparably associated with the Ettrick Shepherd, a monument to whom stands at the N end of the isthmus referred to. In the NE of Roberton parish are Hellmoor and Alemoor Lochs; the latter, an expansion of the river Ale, about 2 miles in circumference. Other small lakes, all in the same district, are Kingside, Crooked, Shaws, and Akermoor Lochs; while the Haining Loch was, till recently, the chief source of the water supply of the town of Selkirk.

Geology.—There is little variety in the geology of this county, as the stratified rocks belong exclusively to the Silurian formation. The strata represented are divisible into three groups, which are easily distinguished by marked lithological characters. Of these, the lowest consists of brown crusted greywackes, flags, and shales; the beds being singularly destitute of fossils. They form the high ground along the S border of the county, and at Ettrick Bridge End plunge underneath the overlying black shales, flags, and sandstones—the prolongations towards the NE of the Moffat Black Shale series. These are in turn overlaid by the members of the third group, composed mainly of massive grits forming the Queensberry series of the Geological Survey. A line drawn from Ettrick Bridge End, SW to the county boundary at the Blue Cairn Hill, indicates the outcrop of the black shales, where they rest on the underlying greywackes and flags and pass underneath the Queensberry grits. The general inclination of the strata along this line is towards the NW, so that there appears to be a regular ascending series from the brown tinted strata through the black shales to the Queensberry grits. The order of succession of the black shale series has been admirably worked out by Professor Lapworth in Moffatdale—the region where they are typically developed. A generalised section in the basin of the Ettrick shows at the base hard flinty black shales with chert bands, the shales being characterised by *Dicellograpti, Dicranograpti, Thamnograpti,* etc. These are overlaid by grey shaly mudstones, with occasional calcareous nodular bands, and two thin bands of black shale containing *Dicellograptus anceps.* To these succeed black flaggy shales, with thin partings yielding the following forms: *Graptolithus gregarius, Diplograptus acuminatus, D. vesiculosus, Climacograptus teritiusculus,* etc. Next in order come alternations of dark blue, almost black and white shales with clay bands; the black shales yielding *Graptolithus gregarius, G. Sedgwickii, G. tenuis,* and several *Diplograpti.* At the top of the series come about 20 feet of blue shale, like the overlying Grieston beds, with occasional beds of silky and dark shales containing mainly simple graptolites, several species of Rastrites, and a few *Diplograpti.* Perhaps the finest sections are to be met with in that part of the county extending from St Mary's Loch and Altrieve to the head waters of the Ettrick. In that region the black shales come to the surface along a series of anticlinal folds in the overlying Queensberry Grits, and present much the same order of succession which obtains in Moffatdale. To the S and E of this area, however, there is a remarkable change observable in the members of this series. On the crest of each successive anticline of the Moffat series, as we pass towards the S, there is a gradual increase in the thickness of the sedimentary strata

associated with the black shales, until, near Ettrick Pen, the latter are represented only by a few thin zones belonging to the highest subdivisions of the group. For some miles to the E of St Mary's Loch the Moffat series is buried underneath the overlying Queensberry Grits, but where they reappear the main subdivisions are still traceable with certain variations.

At the base of the Queensberry group there is a variable thickness of shales and flags representing the well-known Grieston shales. They are not typically developed in this area, but in the neighbourhood of Ettrick they assume the flaggy character which towards the NE merges into the Roxburgh type.

Throughout the county the strata are thrown into a constant succession of synclines and anticlines, and over a considerable part of the Ettrick area the folds are inverted. If the black shale series had not been exposed by denudation along the crests of the anticlines, it would have been very difficult to unravel the geological structure of that region. But with the aid of the various subdivisions and their embedded fossils, it is possible to decipher the most complicated sections.

The Silurian strata are singularly free from intrusive igneous rocks. The dykes of minette or mica trap, referred to in the article on the geology of Roxburgh, are also represented in this county near Todrig, where they are much decomposed, weathering frequently into a ferruginous sand, while the walls of the dyke are hardened and silicified. These dykes were intruded among the Silurian strata prior to Upper Old Red Sandstone time, but the evidence in favour of their being older than the lower division of that formation is extremely doubtful. Quartz-felsite occurs in the form of dykes on the heights surrounding the Caddon Water; but perhaps the most interesting development of these veins is in the small detached area of Selkirkshire to the NE of Innerleithen. Basalt dykes of Tertiary age are also represented in the county. One of them crosses the Bowerhope Law, overlooking St Mary's Loch, and probably is a prolongation of the dyke which passes through Hawick. Several small basalt veins occur in the neighbourhood of the head waters of the Ettrick. These are probably the continuations of the great basalt dykes that cross the Clyde near Abington, which have been traced far to the NW into Ayrshire and Renfrewshire.

The general trend of the ice movement throughout the county was from W to E, as proved, both by the striæ and the dispersal of the stones in the boulder clay. In the neighbourhood of St Mary's Loch the direction is a few degrees to the N of E, while on the heights between Eskdalemuir and Borthwick and Ettrick it is ENE. Near Selkirk the trend varies from ENE to NE. There are extensive deposits of boulder clay along the valleys, presenting the features commonly met with in Silurian areas. An examination of the stones in the boulder clay points to the conclusion that blocks were carried in the *moraine profonde* from Moffatdale into the vale of Ettrick towards Eskdalemuir, surmounting, in fact, the highest ground in the county. In the valleys situated to the N of the line of outcrop of the black shales at Ettrick Bridge End, the boulder clay forms well-marked terraces which have been cut through by the streams. The same distribution of the deposits is observable throughout the area occupied by the flags and greywackes underlying the black shales. The valleys or depressions are smaller, however, and the rib-shaped features formed by the rock project above the deposit of boulder clay. There is one interesting feature connected with the Selkirkshire valleys which is worthy of note. The slopes of the hills facing the ice flow are usually steep and rocky, while the opposite sides of the valleys are covered with drift. Such a disposition of the boulder clay is readily accounted for when we remember that the deposit would naturally accumulate in the lee of the hill ranges, while the slopes of the hills exposed to the sweep of the ice sheet would be subjected to a vast amount of erosion.

Many of the valleys in the upper part of the county

nourished glaciers during the later phases of the ice age. Nearly all the tributary valleys in the upper part of the basin of the Ettrick possessed glaciers that united in the main valley, relics of which are still to be found in the groups of moraines. Excellent examples occur in the Coomb Burn—a great basin-shaped hollow scooped out of the shoulder of Ettrick Pen, and another conspicuous group is to be seen on the watershed between the head waters of the Yarrow and Moffat, where the ice seems to have moved E towards St Mary's Loch. This sheet of water and the Loch of the Lowes seem to have formed originally one lake, filling an ancient rock basin, which was probably excavated during the extreme glaciation. The Loch of the Lowes has been isolated from St Mary's by the cones of detritus accumulated by the Whitehope Burn on the S and the Oxcleugh Burn on the W.

Economic Minerals.—Excellent building stone is obtained from the massive grits of the Queensberry series, and the harder greywacke bands underlying the Moffat black shale group.

Soil.—The soil, lying largely on a bottom of gravel, or whinstone, is, generally speaking, sound and dry. Marshy ground is, however, found near the tops of some of the hills, and among the moors of the SW. What little clay soil there is in the county lies mainly midway between the base and summits of the hills. The soil of the arable land is light and easily worked, and is well drained by the configuration of the surface. The sheep-walks lie mostly on greywacke rock or gravel, and are sound and dry.

Climate.—More rain falls on the moors and lofty hills of the W than on the other parts of the county. Snow-storms used to be frequent, and in some of the deep gullies the snow used to lie till almost summer. The air is pure, and the climate healthy; and the people attain a fair average of longevity.

Industries.—Besides the manufacturing industries which centre wholly in the towns and larger villages, Selkirkshire carries on arable and pastoral farming—which indeed is the sole county industry proper. According to the returns of 1881, 984 of the male population were engaged in agriculture, 5732 in industrial pursuits, 425 in commerce, 4898 unproductive, and the rest variously employed. As its title of Ettrick Forest suggests, this county was in early times covered with woods, and so more adapted to the chase than to tillage; indeed it was only in the third decade of last century that any considerable agricultural improvements were set on foot. Since then, however, great advances have been made, though the county has always been far more pastoral than agricultural. An estimate made near the close of the 18th century, assuming the total area of the county at the much exaggerated extent of 181,000 acres, distributed 169,650 to pasturage, 300 to arable ground, 2200 to plantations and coppice, and 250 to garden and pleasure-ground. The present proportions, though different, do not deviate very largely from these results. Wheat has been raised in tolerably good crops at a height of 700 feet above sea-level; and oats, turnips, barley, and clover-hay thrive in regular rotation on ground from 700 to 800 feet above sea-level, near the head of Ettrick Water. According to the returns of 1881 there were in the county 35 farms of 1000 acres or more, 30 between 500 and 1000, 14 between 100 and 500, and 5 between 5 and 100 acres. The following table exhibits the acreage under the chief crops at various dates:—

	1857.	1868.	1877.	1884.
Wheat,	261	41	53	16
Oats,	4162	4255	4449	4494
Barley,	949	663	676	376
Turnips,	2624	2671	2942	2553
Cabbages, etc.,	..	102	253	263
Other Green Crops,	..	223	252	252
Bare Fallow,	65	..	..	38
Grass, Permanent Pasture,	..	5789	6286	7518
Grass in Rotation,	..	6950	7374	7753

In 1884 there were 3228 acres under plantation, and 7 acres in market gardens and nursery-ground.

The following table shows the numbers of live-stock in the county at various dates:—

	1857.	1868.	1876.	1884.
Horses,	598	..	568	580
Cattle,	2,449	2,402	2,572	2,657
Sheep,	145,732	170,305	162,719	165,061
Pigs,	474	359	447	449

As will be seen from the above table, sheep-farming is a highly important industry in the county, and is largely developed. The common breed of sheep is the Cheviot, which is highly valued for its wool. The blackfaced breed, at one time more numerous than any other kind, is reared in more limited numbers.

The manufacture of woollens is very important, but has been already treated in the articles on the towns and chief villages. Its development has contributed largely to increase the value of property in the county. The trade of Selkirkshire consists chiefly in the sale and export of sheep, lambs, and the manufactures of the towns; and the import of food, Australian wool, coal, and lime. Among the other resources of the county are the salmon fisheries on the Tweed, and the other fishings and shootings. According to the *Sportsman and Tourist's Guide* for Oct. 1884, the annual value of fishings let in Selkirkshire was £305, and the annual value of the grouse and other shootings was £1473. The extensive vineries at Clovenfords, where enormous quantities of grapes are grown for the markets, should also be classed among the industrial institutions of the county.

All the habitable portions of the county are well provided with good roads. The chief roads run along respectively the banks of the Tweed, the Yarrow, and the Ettrick; and various cross roads and minor thoroughfares intersect the portions of the county between these. The line of the North British railway from Edinburgh to Carlisle skirts the NE boundary for about 5 miles, with stations within the county at Bowland and Galashiels. A branch of the same line, 6 miles long, extends from Galashiels southwards to Selkirk, intersecting a part of Roxburghshire, and passing the Selkirkshire station of Abbotsford Ferry. Another branch runs from Galashiels westwards along the course of the Tweed to Innerleithen and Peebles. Its Selkirkshire stations are at Clovenfords and Thornilee. Thus the whole county S of the Tweed is as yet quite untouched by any railway, with the exception of the short branch line to Selkirk, so that visitors to St Mary's Loch district must avail themselves of the coaches plying from Selkirk or from Innerleithen, if they are dependent on the public means of conveyance. The only royal burgh in the county is Selkirk (6090); the only other town is part of Galashiels. Villages and hamlets are Clovenfords, part of Deanburnhaugh, Ettrick Bridge, Yarrow-feus, and Yarrow-ford. The chief seats are Bowhill (Duke of Buccleuch), Broadmeadows, Elibank Cottage (Lord Elibank), Gala House, Glenmayne, Haining, Hangingshaw, Harewoodglen, Holylee, Laidlawstiel (Lord and Lady Reay), Philiphaugh, Rodono (now let as an hotel), Sunderland Hall, Thirlestane (Lord Napier and Ettrick), Torwoodlee, and Yair. The chief landowner in the county is the Duke of Buccleuch. According to the *Miscellaneous Statistics of the United Kingdom* (1879), 161,815 acres, with a total gross estimated rental of £103,030, were divided among 706 proprietors; the Duke of Buccleuch holding 60,428 acres (rental, £19,828), six together holding 42,868 (£12,272), twelve 35,964 (£19,122), ten 14,923 (£7777), six 5060 (£3031), seven 1684 (£2124), etc.

Selkirkshire is governed by a lord-lieutenant, 12 deputy-lieutenants, a sheriff, sheriff-substitute, and its justices of the peace. Sheriff and other courts are held at Selkirk and Galashiels periodically as detailed in our articles on these towns. The county police force in 1884 comprised 14 men, under a chief constable.

From 1832 till 1867 the county, inclusive of the burgh, sent one member to parliament; but it now unites with Peeblesshire in returning one member, and the burgh of Selkirk unites with Hawick and Galashiels in returning another. The parliamentary constituency of the county in 1885 was 306. Valuation of the county (1674) £6692, (1865) £63,651, (1885) £67,709, *plus* £6174 for railway. According to the census of 1881 Selkirkshire had an average of 99 inhabitants to the square mile, 12 counties being more densely populated, and the average for all Scotland being 125. Pop. (1801) 5388, (1811) 5889, (1821) 6637, (1831) 6838, (1841) 7990, (1851) 9809, (1861) 10,449, (1871) 14,005, and (1881) 25,564, of whom 13,405 were females, and 11 Gaelic-speaking. Houses (1881) occupied 5082, vacant 264, building 86.

The registration county takes in part of Yarrow parish from Peeblesshire, parts of Selkirk, Galashiels, and Roberton parishes from Roxburghshire; gives off part of Stow parish to Edinburghshire, part of Ashkirk parish to Roxburghshire, and parts of Peebles and Innerleithen parishes to Peeblesshire; and comprehends 5 entire *quoad civilia* parishes, and had in 1881 a population of 26,346. All the parishes are assessed for the poor. The civil county includes two entire *quoad civilia* parishes (Ettrick and Kirkhope), the greater part of Galashiels, Selkirk, and Yarrow, and portions of Ashkirk, Innerleithen, Melrose, Peebles, Roberton, and Stow. It contains four entire *quoad sacra* parishes, and has two small parts of *quoad civilia* parishes in the presbytery of Peebles and the synod of Lothian and Tweeddale, and another small part *quoad civilia* in the presbytery of Lauder and synod of Merse and Teviotdale; and all its other parts are in the presbytery of Selkirk and synod of Merse and Teviotdale. There are in the shire 20 elementary schools (15 of them public), which, with a total accommodation for 4191 children, had in 1883 on their registers 3551, and an average attendance of 2875.

Antiquities.—Selkirkshire seems always to have maintained its character as a 'forest' or hunting-place, so that the remains of its ancient inhabitants are not numerous. In the eastern parts there are remains of several British forts, and what has been described as a square or Roman camp, has been traced on the Borthwick Water. The chief British antiquity is the Catrail, which intersects part of this county. Three crosses, called William's, Tait's, and Craik, stood respectively on a height near Broadmeadows, on Kershope Hill and on Craik Moor. Among the less ancient, but the most interesting, antiquities of the county are the ruined castles and moss-grown towers of the old Border troopers, none of them older than the 14th, and most belonging to the 16th or the 17th, century. The names of very many of these are familiar in Scottish Border ballad and history; for none of the Border counties is more celebrated in song than Ettrick Forest. Among the more famous of these towers are Dryhope Tower, where dwelt Mary Scott 'the Flower of Yarrow;' Hangingshaw, the scene of the ballad of 'The Outlaw Murray;' 'the shattered front of Newark's Tower, renowned in Border Story,' as Wordsworth sings, Thirlestane, Gamescleuch, Tushielaw, the hold of Adam Scott, 'the King of the Borders;' Oakwood, Deuchar, Blindlee, and Kirkhope. Blackhouse Tower was the scene of the Douglas tragedy; and 'seven large stones,' says Sir Walter Scott, 'erected, upon the neighbouring heights of Blackhouse, are shown as marking the spots where the seven brethren were slain; and the Douglas Burn is averred to have been the stream at which the lovers stopped to drink.' There are still vestiges of a tower to mark the site of the abode of 'Jamie Telfer of the Fair Dodhead;' and the position may still be traced of St Mary's Kirk, near St Mary's Loch, which was destroyed by the Scotts in a feud with the Cranstons in 1557. The old church of Buccleuch, also, has left some remains.

History.—The territory now known as Selkirkshire formed part of the domains of the ancient Gadeni, who seem to have occupied it rather as hunters than as settlers. The Saxons, also, who followed upon the retirement of the Romans, seem not to have cleared away the woods to any great extent; for, many centuries after their first appearance, the shire still was famous for its forests and its facilities for the chase. Under the Scottish kings, the forest was a royal demesne; and the barons and Border nobles who dwelt in it, held their lands nominally as kindly tenants or rentallers of the crown; and according to Sir Walter Scott, did not receive charters till about 230 years ago. But in point of fact, the Border chieftains paid little attention to the conditions of their holding, and acted with complete independence — requiring James V. himself to take strong measures to reduce them to order. Sheriffs were appointed by the king; the earliest on record appearing before 1214. King Edward I. of England, in 1304, granted to the Earl of Gloucester the keeping of the forest of Selkirk, and in 1305 recognised the Earl of Pembroke as the hereditary sheriff of the county. From soon after the accession of Bruce till 1455, the forest was, however, held of the Scottish crown by the Douglases. In 1346 William Douglas succeeded in expelling the English from at least part of this county. In 1509 the sheriffdom was assigned to John Murray of Falahill; and in 1748, on the abolition of hereditary jurisdictions, John Murray of Philiphaugh received £4000 in compensation, and the Duke of Douglas a lesser sum. The more romantic features of its history are closely interwoven with its literature; and the numerous Border ballads commemorate more or less accurately various historical incidents connected with the shire. The pathetic ballad of *The Flowers of the Forest* refers to the desolation caused in the district by the disaster of Flodden; while the ballad of the Battle of Philiphaugh records the victory within the county of the Covenanters over Montrose in 1645. The labours of Scott, who lived for a time at Ashiestiel, and was sheriff of Selkirk; of Hogg, who was born in the vale of Ettrick in 1770; and others, have either preserved or caused the lyric fame of countless spots within the county, from the 'Dowie Dens o' Yarrow,' to the famed anglers' hostelry of Tibbie Shiels at St Mary's Loch.—*Ord. Sur.*, shs. 25, 17, 16, 24, 1864-65. See Mr T. Craig Brown's forthcoming *History of Selkirkshire.*

Sempill. See Castle-Semple.

Senwick, an ancient parish of Kirkcudbrightshire, united to Borgue in 1618. Its ruined church is beautifully situated near the W of Kirkcudbright Bay, 5½ miles SSW of Kirkcudbright. In the kirkyard is buried John M'Taggart (1791-1830), author of the *Gallovidian Encyclopædia.* Senwick House, a little to the NW, is the seat of Adam John Corrie, Esq. of Dunrod (b. 1842; suc. 1874), who holds 1062 acres in the shire, valued at £1156 per annum.—*Ord. Sur.*, sh. 5, 1857.

Seton, an ancient parish of Haddingtonshire, annexed to Tranent in 1580. Its church of St Mary and Holy Cross, 1¾ mile NE of Tranent town and 2½ miles SW of Longniddry station, must have been founded prior to Robert III.'s accession in 1390, since early in his reign Catherine Sinclair of Herdmandston, widow of Lord William Seton, 'biggit ane yle on the south syde of the paroche kirk of Seytoun.' From time to time additions were made to the church, which George, second Lord Seton, rendered collegiate in 1493 for a provost, six prebendaries, a clerk, and two singing boys; but it was never completed, and in 1544 suffered much at the hands of the English invaders, who 'tuk away the bellis and organis and other tursable (movable) thingis, and put thame in thair schippis, and brint the tymber wark within the said kirk.' As restored at considerable cost by the late Earl of Wemyss, who is buried here with his Countess, Seton church now consists of a Decorated three-bayed choir, with a trigonal apse and a N sacristy, two transeptal chapels, and a low square Early English tower, with a truncated octagonal spire. The tracery of the choir windows is very good, and special features of interest are the sedilia and piscina, three

monumental effigies of the Setons, and a long Latin inscription to the fifth Lord.

Seton Palace, which stood near the church, appears to have been built at different periods. It is said to have been 'burnt and destroyed' by the English in 1544, and its SE front most probably dated from the reign of Queen Mary. It excelled in taste and elegance any other mansion of the 16th or the 17th century, and was esteemed much the most magnificent castle in Scotland. Its gardens and terrace walks, as well as its splendid interior, were the delight of kings; and it consisted of two sides of a quadrangle, united by a rampart. When, on 5 April 1603, James VI. was on his way to take possession of his English crown, he met the funeral of the first Earl of Winton, and, halting his retinue, he seated himself on the garden-wall of the palace whilst the funeral passed by. In 1617, the same monarch, revisiting his native kingdom, spent at Seton his second night after crossing the Tweed; and Charles I. and his court were twice entertained here in 1633. No vestige of the palace now remains, it having been pulled down in 1790 by Mr Mackenzie of Portmore, the then proprietor, who erected the present castellated edifice after a design by Adams.

In the 12th century the ancestors of the Seton family received a charter of the lands of Seton, Winton, and Winchburgh. Alexander de Seton, a nephew of Robert Bruce, obtained from his royal uncle the manor of Tranent, and other extensive possessions of the noble family of De Quincy, who had espoused the cause of the English king. The Setons became one of the richest and most influential families in Scotland, great in their own strength, and exalted by many noble and princely intermarriages. They were created Lords Seton in 1448. George, third Lord Seton, fell at Flodden (1513), and George, fifth Lord, is famous in history as Queen Mary's most zealous adherent, and, with two of his children, figures conspicuously in Sir Walter Scott's tale of *The Abbot*. Calderwood characteristically speaks of him as 'a man without God, without honestie, and often times without reason.' On 11 March 1566, the night after Rizzio's murder, the Queen and Darnley, slipping out of Holyrood, rode straight to Seton, and thence got an escort to Dunbar; and on Sunday, Feb. 16, 1567, just a week after Darnley's assassination, the Queen and Bothwell went to Seton Palace. There they remained some days, amusing themselves shooting at the butts, and, having together won a match against Seton and Huntly, were entertained by the losers to a dinner at Tranent. Lord Seton was one of Mary's chief supporters at Carberry Hill, and when she made her escape from Loch Leven in May 1568, he was lying among the hills on the other side, and immediately joining her, conducted her first to his castle of Niddry, in Linlithgowshire, and then to Hamilton. From the defeat of Langside he retired to Flanders, where, during two years of exile, he was forced for his living to become a waggoner. A painting of him driving a waggon with four horses was in the north end of the long gallery of Seton. In 1584 he was sent by James VI. on an embassy to France; and he died soon after his return, on 8 January 1585, aged about 55. In 1600 Robert, his son, was created Earl of Winton—a title forfeited by the fifth Earl for his part in the rebellion of 1715, when Seton Palace was held for three days by a body of Highlanders under Mackintosh of Borlum. The Earl died unmarried at Rome in 1749; and, through the marriage, in 1582, of the first Earl of Winton with the eldest daughter of the third Earl of Eglinton, the representation of the Winton family devolved on the Earl of Eglinton, who in 1840 was served heir male general of George, fourth Earl of Winton, and who in 1859 was created Earl of Winton in the peerage of the United Kingdom.—*Ord. Sur.*, sh. 33, 1863. See Sir Richard Maitland's *Cronicle of the House of Seytoun* (Bannatyne Club, 1829); vol. iv. of Billings' *Baronial and Ecclesiastical Antiquities* (1852); and pp. 183-194 of P. M'Neill's *Tranent and its Surroundings* (1883).

Shaggie Burn, a stream of Monzie and Crieff parishes, Perthshire, rising at an altitude of 2050 feet, and running 6 miles south-south-eastward and south-south-westward, till, after a total descent of 1800 feet, it falls into Turret Burn, 1¼ mile N by W of Crieff. It forms three cascades, has beautiful copse-clad banks, contains small trout, and itself receives Keltie Burn.—*Ord. Sur.*, sh. 47, 1869.

Shambellie, a modern mansion, with beautiful grounds, in Newabbey parish, Kirkcudbrightshire, 7 miles S by W of Dumfries. Its owner, William Stewart, Esq. (b. 1848; suc. 1874), holds 2468 acres in the shire, valued at £1517, 18s. per annum.—*Ord. Sur.*, sh. 5, 1857.

Shandon, a place in Row parish, Dumbartonshire, on the E shore of the Gare Loch, 4⅛ to 5⅛ miles NW of Helensburgh. It has a Free church, a steamboat pier, and a post and telegraph office under Helensburgh. Its name (Gael. *sean-dun*, 'old fortress') is derived from the 'Old Dun,' traces of which are still visible. West Shandon, a fine Elizabethan edifice of two stories, with a lofty turreted tower, was commenced in 1851 as the seat of Robert Napier, Esq. (1791-1876), the great marine engineer. After his death its splendid collection of art treasures was sold in London; and the mansion itself was converted into a hydropathic establishment, being enlarged by the addition of Turkish and swimming baths, etc. The grounds are of great beauty, with their winter garden and artificial ponds, and the view from the house is singularly fine.—*Ord. Sur.*, sh. 30, 1866.

Shandwick. See Nigg, Ross-shire.

Shankend Station. See Cavers.

Shankston Loch. See Kirkmichael, Ayrshire.

Shanter. See Kirkoswald.

Shanwell House, a mansion in Orwell parish, Kinross-shire, near the left bank of the North Queich, 3 miles W of Milnathort.

Shapinshay, an Orkney island, 1 mile N of the nearest part of Pomona, 3§ miles S by W of Eday, 3¾ W of Stronsay, and 3¾ NNE of Kirkwall, under which there is a post office of Balfour, with money order and savings' bank departments. Its utmost length, from E to W, is 4⅛ miles; its breadth, from N to S, varies between 1§ and 4¼ miles; and its area is 6733 acres, of which 85 belong to the pastoral islet of Helliar Holm (2 × 1½ furl.; 90 feet high). On its southern coast, towards the W, lies the modern village of Ellwick, around a fine bay of the same name; whilst the N side is indented by Veantroy Bay, which, measuring 2¼ miles across the entrance, and 1§ mile thence to its inmost recess, is flanked to the W by Galt Ness, to the E by the Ness of Ork. The surface, all round the shore, and for some way inward, is low and tolerably level, but rises gradually towards the centre, where the Ward Hill (162 feet) commands a map-like view of great part of the Orkney Islands. To abridge from an article by Mr Pringle in *Trans. Highl. and Ag. Soc.* (1874), 'The surface soil is naturally moorish, and covered with short heath, but underneath there is, for the most part, deep red clay subsoil, with which the upper soil mixes well. Much of the upper soil, however, has been skinned in former times for the purpose of mixing with dung to manure the "infield" land. The prevailing rock in the western part of the island is clay-slate, which mostly lies at a considerable depth from the surface. A coarse sandstone prevails in the eastern part. There is not much peaty soil, *i.e.*, deep enough to convert into peat fuel; and this kind of land is now nearly run out. Nearly all the land has required draining, which appears to have been efficiently done with stones or pipe tiles. In 1848 there were exactly 700 acres—one-tenth of the entire area of the island—in cultivation. In 1859 the arable land had been increased to 5000 acres, and now it extends to over 6000. In 1848 the land under cultivation was scattered in small patches of a few acres here and there all over the island, but Shapinshay now presents one continuous tract of cultivation, until we reach the extreme point of the island on the E, where there is some unimproved land, immediately behind an exposed headland. The

farms vary from 30 to 200 acres in extent, as it has been Col. Balfour's principle to encourage his tenants to rise in the social scale; and some, who now occupy large farms, began on much smaller holdings. In former times the people lived partly by the sea and partly by the land, and were neither fishermen nor farmers; but this is all altered, and a man must elect to be either one or the other. Houses, draining, and other permanent improvements are erected and done either by the tenant, who receives "amelioration" for the same at the end of his lease, or by the proprietor, in which case the tenant pays interest on the outlay; but, in general, the tenants prefer the former plan. Houses and cottages must, however, be put up according to plans approved by the proprietor; and in Shapinshay the new farm-steadings and cottages are all of a most substantial character. When Col. Balfour laid off the island into squares, he provided at the same time for main lines of excellent road throughout the island, and these have since been completed to the extent of 12 miles.' Picts' houses, for the most part pleasantly situated, are numerous along the shores, and usually occur at such intervals that two or three are within view of each other. The Standing-Stone of Shapinshay, near the centre of the island, rises 12 feet above the surface of the ground, and the Black Stone of Odin, a huge mass of rock, lies prostrate on the sand of the northern shore. Both are supposed to have been deemed sacred in Scandinavian folklore. A place called Grucula, on the W coast, nearly opposite the skerry of Vasa, where the tides are rapid and the sea is shallow, is absurdly said to have received its name from the stranding on it of one of Agricola's ships, in the celebrated voyage of discovery round the northern seas of Britain (86 A.D.). Balfour Castle, 6 miles NNE of Kirkwall, commands a magnificent view, and itself is an imposing Scottish Baronial edifice, erected in 1847 from designs by the late David Bryce, R.S.A., with a fine library, conservatories, vineries, peach-houses, terraced gardens, and thriving plantations. Its owner, Col. David Balfour of Balfour and Trenabie (b. 1811; suc. 1846), holds 29,054 acres in Orkney, valued at £7578 per annum. Shapinshay is a parish in the presbytery of North Isles and the synod of Orkney; the living is worth £212. There are Established, U.P., and Evangelical Union churches; and a public and another school, with respective accommodation for 100 and 47 children, had (1884) an average attendance of 67 and 36, and grants of £76, 16s. 6d. and £38, 2s. Valuation (1860) £1421, (1884) £2273, 15s. 7d. Pop. (1801) 744, (1831) 809, (1861) 973, (1871) 949, (1881) 974.

Shawbost or **Sheabost**, a village in the Carloway portion of Loch parish, Lewis, Ross-shire, near the NW coast, 5¾ miles NE of Carloway. Pop. (1861) 312, (1871) 376, (1881) 322.—*Ord. Sur.*, sh. 105, 1858.

Shawhead. See KIRKPATRICK-IRONGRAY.

Shawhill, a neat modern mansion in Riccarton parish, Ayrshire, near the left bank of the winding Irvine, 5 furlongs NNE of Hurlford.

Shaw Park. See SCHAW PARK.

Shaws Loch. See KIRKHOPE.

Shee. See GLENSHEE.

Sheeoch, Burn of. See DURRIS.

Sheep Isle. See SANDA.

Sheep Isle, an islet of Kilbrandon parish, Argyllshire, 1 mile NW of SEIL, and 5¼ miles SW of Kerrera. It measures 7 by 2 furlongs, and has an abrupt rocky boundary of low cliffs. It forms a connecting link between Mull on the one hand, and Seil and Kerrera on the other. Its name of Sheep Isle is a fictitious one, given it by map-makers; whilst Inis-Capul, its real name, in the translated form of Mare Island has been erroneously applied to the Garvelloch islands, 6 miles to the SSW. Pop. (1871) 4, (1881) 2.

Sheil. See GLENSHIEL.

Sheildaig. See SHIELDAIG.

Shell, Loch, a sea-loch of Lochs parish, Ross-shire, on the E coast of the Lewis, 15½ miles S by W of Stornoway. It strikes 6¾ miles west-by-northward, and measures 3¼ miles across the entrance, in which lies Eilean Iubhard (1⅜ mile × 5 furl.; 100 feet high).—*Ord. Sur.*, sh. 99, 1858.

Sheriffmuir, a battlefield in Dunblane parish, Perthshire, on the north-western slope of the Ochils, 2½ miles E by N of Dunblane town. The battle was fought on 13 Nov. 1715—the same day on which the Pretender's forces surrendered at Preston in England. The Duke of Argyll commanded the royalist troops, and the Earl of Mar those of the Pretender. The Earl, having just taken up his quarters at Perth, and received strong reinforcements from the north, got intelligence which led him to believe that the Duke was insecurely posted at Stirling. Accordingly, he conceived the idea of forcing the passage of the Forth, and marching southward in defiance of the Duke, so as to form a junction with the Pretender's friends in the south. He left Perth on 11 Nov., and rested that night at Auchterarder. Argyll, getting information of his movement, determined instantly to intercept him, and give him battle. He accordingly passed the Forth at Stirling on the 12th, and took post in the neighbourhood of Dunblane, with his left resting on that town, and his right extending towards Sheriffmuir. Mar arrived the same evening within 2 miles of Argyll, and encamped for the night in order of battle. His troops amounted to 8400; while those of Argyll did not exceed 3500. General Whetham commanded the left wing of the royal army, and Argyll himself commanded the right. Early on the 13th the right wing of the rebel army commenced the battle by a furious attack on the royalist left. They charged sword in hand with such impetuosity as at once to break General Whetham's array, and drive his troops into complete rout, with prodigious slaughter. Whetham fled at full gallop to Stirling, and there announced that the royal army was totally defeated. But, in the meantime, Argyll, with the right wing of the royalist army, attacked and broke the rebels' left, and drove them 2 miles back to the Allan. He pushed his advantage chiefly by the force of his cavalry, and was obliged to resist no fewer than ten successive attempts to rally. A part of his infantry was following hard to support him, when the right wing of the rebel army, suddenly returning from the pursuit of Whetham, appeared in their rear, and threatened to crush both them and the cavalry. Argyll faced about, with all his strength, to repel this new and great danger. The antagonist forces, however, looked irresolutely at each other, neither of them seeming disposed to rush into fresh conflict; and after cooling completely down from the fighting point, they retired quietly from each other's presence, Argyll to the town of Dunblane, and Mar to the village of Ardoch. Both armies laid claim to the victory, and hence the well-known sarcastic lines:—

> 'There's some say that we wan,
> And some say that they wan,
> And some say that nane wan at a', man;
> But ae thing I'm sure
> That at Sheriffmuir,
> A battle there was, that I saw, man;
> And we ran and they ran, and they ran and we ran,
> And we ran, and they ran awa, man.'

For Argyll, however, this ineffectual conflict had all the results of a victory. On the field of battle is a large block of whinstone, the 'Gathering Stone of the Clans,' on which the Highlanders are said to have whetted their dirks and claymores, and which in 1840 was enclosed in a strong iron grating by the late Mr Stirling of Kippendavie.—*Ord. Sur.*, sh. 39, 1869.

Shetland, a group of islands and islets lying NE of the Orkney Islands, forming a division of the county of Orkney and Shetland, and the most northerly part of the whole of Scotland. The group consists of 29 inhabited islands, about 71 smaller islands used for grazing purposes, and a very large number of waste rocky islets and skerries. All the islands except two—Fair Isle and Foula—form a compact group, the most southerly point

of which, Sumburgh Head, is 50 miles NE of Point of Sinsoss, the most northerly point of North Ronaldshay. Fair Isle is 27 miles ENE of Point of Sinsoss and 24 SW of Sumburgh Head, and Foula is 27 miles W of Scalloway and 16 WSW of the nearest part of the Mainland island at Wats Ness in the parish of Delting. Four miles NE of Foula are the Havre de Grind Rocks. The group extends from N latitude 60° 51′ 45″ (Out Stack, N of Unst) to 59° 30′ 30″ (Meo Ness at the S end of Fair Isle), and from W longitude 0° 40′ 20″ (Bound Skerry, one of the Out Skerries NE of Whalsey) to W longitude 2° 7′ (Wester Hoevdi on the W side of Foula). Excluding the outlying islands, the compact main portion extends from N latitude 60° 51′ 45″ (at Out Stack) to 59° 50′ 56″ at Horse Island W by S of Sumburgh Head, and from W longitude 0° 40′ 20″ (at Bound Skerry) to 1° 40′ 30″ at Fogla Skerry W of Papa Stour. The distance in a straight line, from either The Gord or The Noup at the N end of Unst south-south-westward to Sumburgh Head, is 70 miles, and the breadth, from Bound Skerry west-south-westward to Fogla Skerry, 35¾ miles, but the average breadth is very much less. Sumburgh Head lies 170 miles N of Buchan Ness, and the distance from Out Skerries across the North Sea to the mainland of Norway near Bergen is 204 miles. The principal island of the group is the Mainland, which comprises more than half the area, and contains fully two-thirds of the inhabitants. It extends from N to S for 54 miles—that being the distance in a straight line from Point of Fethaland (N) to Sumburgh Head (S)—and has an extreme breadth of 21⅝ miles from Stava Ness on the S side of Dury Voe opposite Whalsey, to Matta Taing on the W near Melby. It is impossible to give any general idea of its outline, as the coast-line is everywhere broken up by deep voes,* some of which run so far inland as almost to divide the land into several islands. The chief of these bays or inlets are, from N to S, along the E coast, Burra Voe, Colla Firth, Gluss Voe, Sullom Voe—including Ell Wick (at the head) and Garths Voe (E)—Orka Voe, Dales Voe, another Colla Firth, Swining Voe, and Lunna Voe—these four all close together W of Lunnasting—Hamna Voe, Vidlin Voe, Dury Voe, South Nesting Bay, Cat Firth, Wadbister Voe, Lax Firth, another Dales Voe—these four close together to the N of Bressay Sound—Brei Wick, Voe of Sound, Gulber Wick, Aith Voe, Sand Wick, Hos Wick, Channer Wick, and Leven Wick—the last four all branches of one great opening near Sandwick: at the S end West Voe of Sumburgh, and on the other side of Scatness Quendale Bay: on the W side of the long promontory that runs southward and terminates at Sumburgh Head are St Ninian's Bay and Bigton Wick, and away to the N of this is Clift Sound, at the upper end of which is Scalloway Bay, and farther N are Whiteness Voe, Stromness Voe, Weisdale Voe, Sandsound Voe, Sand Voe, Seli Voe, Skelda Voe—the last five opening out into The Deeps and Sandsound Voe passing up into Sandsting Firth and Bixter Voe: farther W are Gruting Voe passing up into Browland Voe, and Vaila Sound; and on the W side of the island is the great St Magnus Bay (12×7 miles), with Voe of Snarraness, West Burra Firth, Brindister Voe, and Voe of Clousta on the S; Aith Voe (SE), Gon Firth and Olna Firth (centre), and Busta Voe (NE)—at the head; and Mangaster Voe, Ura Firth, and Brei Wick, on the N: and farther N still is Ronas† Voe. Many of the inlets are well sheltered, and afford convenient anchorages. St Magnus Bay and Ell Wick at the head of Sullom Voe approach so near to one another that the parish of Delting is connected with the rest of the mainland by a narrow neck of land only some hundred yards wide, and at Gluss Voe, Orka Voe, Lunna Voe, and elsewhere there are also very narrow necks. All round Mainland

* A *voe* is a fiord; a *geo*, a rocky creek with precipitous sides; a *wick* is a broad, open bay.

† So the Ordnance Survey, but the proper spelling is more probably Rooe-ness—Rooe being a corruption of the Norse *raudr*, 'red.'

are many islands and islets, the chief of the former, exclusive of Yell, being West Linga, Whalsey, Bressay, Isle of Noss, and Mousa on the E side; East Burra, West Burra, Trondra, and Vaila on the SW; Papa Stour on the W, and Muckle Rooe, Vementry, and Papa Little at the head of St Magnus Bay. Of the islets the chief are Gruney (⅝ mile N of Point of Fethaland), Muckle Holm, Lamba, Brother Isle, Little Roe, Uynarey, Bigga, Samphrey, Fish Holm, Linga, and Lunna Holm, all in Yell Sound; East Linga, E of Whalsey; Colsay, at St Ninian's Bay; South Havra, S of Burra; Papa, Oxna, Langa, and Hildasay, NW of Burra; and Linga, E of Muckle Rooe. West Linga is separated from the main island by Lunning Sound (1½ mile), and from Whalsey by Linga Sound (4 furl.); Bressay from the main island by Bressay Sound (¼ to 1 mile), and Isle of Noss from Bressay by Noss Sound (200 yards); Mousa from the main island by Mousa Sound (½ mile at narrowest part); East Burra and Trondra from the main island by Clift Sound (¼ to ⅝ mile), the one from the other by Stream Sound (200 yards), and East Burra from West Burra by Long Sound (N), South Voe (middle), and West Voe (S), none of these being anywhere more than ½ mile wide, and so narrow at the junction of Long Sound and South Voe that the two islands are here connected by a bridge; Vaila is separated from the main island by Wester Sound (¼ mile NW), Vaila Sound (N), and Easter Sound (300 yards NE); Papa Stour from the main island by Sound of Papa (1 mile); Vementry by Criba Sound and Uyea Sound (100 to 400 yards, both SE); Papa Little by The Rona (3 furl. SW) and Sound of Houbansetter (¼ to ½ mile E); and Muckle Rooe from Vementry by Swarbacks Minn (1 mile S) and from the main island by Roe Sound (150 to 300 yards NE). Four miles NE of Whalsey are the Out Skerries, the most easterly of them being Bound Skerry; and NE of Mainland are the large islands of Yell, Unst, and Fetlar. Yell is separated from Mainland by Yell Sound, which runs due N and S for 10 miles, and then passes SE for 2½ miles, and E for 4. The north-and-south portion has an average breadth of from 3½ to 4 miles; the narrowest part is about the middle of the south-easterly portion, where, at the island of Bigga, the width is only 2¼ miles; and at the E end the distance from Lunna Holm (Mainland) to Burra Ness (Yell) is fully 2¼ miles. The small islands lying in the Sound have been already mentioned, and at the NW corner of Yell is the small Gloup Holm, at the S end of Bluemull Sound is one of the many islands called Linga, and farther S opposite the middle of the E coast is Hascosay, separated from Yell by Hascosay Sound (½ mile), to the E of which beyond Colgrave Sound (¾ mile to 4 miles) is Fetlar. To the NE of Yell, and separated from it by Bluemull Sound (½ to 1 mile wide and 4 miles long), is Unst, with the Rumblings, Tipta, Muckle Flugga, and Out Stack skerries to the N, the last being the most northerly portion of Scottish land. Off the middle of the E coast are Balta and Huney; near the SE corner is the small Haaf Gruney; and at the S end is Uyea, separated from Unst by Uyea Sound (2½ furl. NW) and Skuda Sound (¼ to ½ mile NNE).

The surface is irregular, and generally rises higher than in Orkney. About half the whole area is over 250 feet above sea-level, but only in a few places does it rise higher than 500 feet, the highest points being Ronas Hill (1475 feet) near the centre of the parish of Delting, in the NW of Mainland, and The Sneug (1372) in Foula. Particulars of all the leading islands and inlets will be found under their separate headings. Between North Ronaldshay and Fair Isle the sea bottom has a depth of from 40 to 60 fathoms, and between Fair Isle and Sumburgh Head the greatest depth is from 60 to 80 fathoms, except at two points NE of Fair Isle, where the depth is between 80 and 100. About the compact portion of the islands the depth of the voes, wicks, and sounds is nowhere greater than 20 fathoms, and a rise of 120 feet would unite the whole into one island, except Out Skerries; East Linga,

Grif Skerry, and the surrounding rocks ENE of Whalsey; Ve Skerries off St Magnus Bay, Fair Isle, and Foula. The last three would not be united to the others till a rise of 360 feet had taken place, when dry land would stretch from Caithness northward far beyond Unst, but all the others would be joined by a rise of 240 feet. The slope of the sea-bottom round the coast from sea-level to 40 fathoms is rapid, but afterwards it becomes more gradual, except SE and E of Sumburgh Head, where the rapid slope continues to 80 fathoms, which is reached within about 4 miles of the shore. Moderate, however, as is the depth of the voes and sounds, the winding nature of the inlets, which, cutting inland on every hand, threaten ere long to add to the number of the islands, attest the hard nature of the struggle that is constantly taking place between the land and the surge of the Atlantic Ocean and the North Sea. No spot, even on the Mainland, is 3 miles from the sea in all directions, and probably no equal land area on the face of the earth has such a large extent of coast-line. 'Probably no part of the British coast-line,' says Dr Archibald Geikie, 'affords such striking evidence of the violence of the waves as that which may be seen along the margin of the Shetlands. These islands are exposed to the unbroken fury at once of the German Ocean and of the Atlantic, while the tides and currents of both seas run round them with great rapidity. Hence their seaboard wears in many places an aspect of utter havoc and ruin. Against their eastern side the North Sea expends its full violence, tearing up the rocks from the craggy headlands, and rolling onwards far up into the most sheltered fiords. The island of Whalsey, for instance, lying off the east side of the mainland, about the middle of the Shetland group, is completely sheltered from the gales of the Atlantic. Yet in the Bound Skerry of Whalsey [Out Skerries], the breakers of the North Sea have torn up masses of rock sometimes 8½ tons in weight, and have heaped them together at a height of no less than 62 feet above high-water mark. Other blocks, ranging in bulk from 6 to 13½ tons, have been actually quarried out of their place *in situ* at levels of from 70 to 74 feet above the sea. One block of 7$\frac{7}{10}$ tons, lying 20 feet above the water, has been lifted from its bed and borne to a distance of 73 feet from SSE to NNW over abrupt opposing faces of rock as much as seven feet in height. On the west side of the Shetland Islands the fury of the Atlantic has produced scenes of devastation which it is hardly possible adequately to describe. In stormy winters, huge blocks of stone are overturned or are removed from their native beds to a distance almost incredible. Dr Hibbert found that in the winter of 1802 a tabular mass, 8 feet 2 inches in length, by 7 feet in breadth, and 5 feet 1 inch in thickness, was dislodged from its bed and removed to a distance of from 80 to 90 feet. In 1820 he found that the bed from which a block had been carried the preceding winter, measured 17½ feet by 7 feet, and 2 feet 8 inches in depth. The removed mass had been borne a distance of 30 feet, when it was shivered into thirteen or more fragments, some of which were carried still further from 30 to 120 feet. A block of 9 feet 2 inches by 6½ feet, and 4 feet thick, was hurled up the acclivity to a distance of 150 feet. "Such," he adds, "is the devastation that has taken place amidst this wreck of nature. Close to the Isle of Stenness is the Skerry of Eshaness [at the NW corner of St Magnus Bay], formidably rising from the sea, and showing on its westerly side a steep precipice, against which all the force of the Atlantic seems to have been expended; it affords refuge for myriads of kittiwakes, whose shrill cries, mingling with the dashing of the waters, wildly accord with the terrific scene that is presented on every side." The result of this constant lashing of the surge has been to scarp the coasts of the Shetlands into the most rugged and fantastic cliffs, and to pierce them with long twilight caves. Dr Hibbert describes "a large cavernous aperture, 90 feet wide, which shows the commencement of two contiguous immense perforations, named the holes of Scranda [or Scraada, near the NW corner of St Magnus Bay], where in one of them that runs 250 feet into the land the sea flows to the utmost extremity. Each has an opening at a distance from the ocean by which the light of the sun is partially admitted. Farther north other ravages of the ocean are displayed. But the most sublime scene is where a mural pile of porphyry, escaping the process of disintegration that is devastating the coast, appears to have been left as a sort of rampart against the inroads of the ocean. The Atlantic, when provoked by wintry gales, batters against it with all the force of real artillery—the waves having, in their repeated assaults, forced for themselves an entrance. This breach, named the Grind of the Navir, is widened every winter by the overwhelming surge, that, finding a passage through it, separates large stones from its sides, and forces them to a distance of 180 feet. In two or three spots the fragments which have been detached are brought together in immense heaps, that appear as an accumulation of cubical masses, the product of some quarry." In other places the progress of the ocean has left lonely stacks, or groups of columnar masses, at a distance from the cliffs. Such are the rocks to the S of Hillswick Ness [N side of St Magnus Bay], and the strange tower-like pinnacles in the same neighbourhood called the Drenge or Drongs, which, when seen from a distance, look like a small fleet of vessels with spread sails.'

Farther interesting details of a similar nature may be found in a paper by Mr Stevenson, the eminent lighthouse engineer, in the fourth volume of the *Proceedings of the Royal Society of Edinburgh* and in his book *On the Design and Construction of Harbours* (1864), as well as in a paper communicated to the British Association by Mr Peach in 1864. The tidal wave comes rushing with great speed and force from the westward, and causes everywhere round the coast currents and eddies of such a nature as to require the greatest care and skill in their navigation, and even in the calmest weather, at the northern and southern extremities, and in the narrow channels where the force of the current is greatest, there is always a considerable sea running.* The flowing tide seems to strike first at the NW, whence one branch passes down the W side, and along the N side of St Magnus Bay towards its head. The rush of water into the bay itself strikes on the southern shore, and while part flows out by the Sound of Papa, the rest is deflected eastward to the top of the bay, and meeting the current from the N side rushes with great force into the open space at Mavis Grind, N of Muckle Rooe. The portion that passes through the Sound of Papa is again united with the main current, which beats against the whole coast on its passage southward, till at Sumburgh Head it turns off south-eastward through Sumburgh Roost. Other branches in the extreme N rush through Bluemull and Yell Sounds, and meeting at the E side with the branch of the tidal wave that has passed round the N end of the group, produce very wild and dangerous cross currents, particularly all round Fetlar. At Out Skerries and Whalsey this current again divides, one branch passing onward to the SE and the other down the E coast of Mainland to meet the W coast current at Sumburgh Roost. During the ebb the flow of the various currents is almost exactly reversed.

Set thus 'far amid the melancholy main,' and that main, too, of such a boisterous and uncertain nature, it is hardly to be wondered that the Shetland Islands long remained a *terra incognita*—of which the inhabitants of 'the adjacent islands of Great Britain and Ireland' had only the vaguest idea, and that idea, like everything vague, almost entirely wrong—more especially when we consider that the only means of communication in the beginning of the century was a sloop, which was supposed to sail from Aberdeen once a month for Lerwick; but as the start depended on the weather and the skipper, only some seven voyages a year were actually

* When a south-easterly gale is blowing against the run of flood tide, Sumburgh Roost, at the S end of Mainland, is probably the wildest portion of sea all round the British coast.

made. Yet notwithstanding this, one is hardly prepared to find in the edition of Bailey's Dictionary, published in 1800, Shetland described as consisting 'of about forty islands at the north of Scotland, where the sun does not set for two months in summer, and does not rise for two months in winter;' or that somewhere about 1810 the Commissioners of Customs refused to pay bounty on some herring caught about Shetland in the winter, on the ground that, as the islands were surrounded by ice at that season of the year, no fish could possibly have been caught there; though perhaps such ignorance can hardly be wondered at when we reflect that about 1854 the Home Office authorities seem to have laboured under the delusion that Gaelic was the common dialect in Orkney; that in 1872 the Education Department were so ignorant of the real condition of the islands, that they approved of plans whereby the school board of Mid and South Yell proposed to spend about £7000 in the erection of six schools, while the whole rental of the parish, from rates on which this was to be paid, amounted to only £1300; and that in 1882 one of the leading London dailies informed its readers that a Glasgow artist had been drowned at 'Kirkwall, Shetland!' Except business men and an occasional traveller of scientific tastes, the islands had, before the publication of the *Pirate*, and still more the introduction of steam communication all the year round in 1853, practically no visitors at all, but this is now changed, and the northern archipelago has a very large tourist traffic. Nor is this to be wondered at, for the scenery of Shetland is far before that of Orkney, and the rocks are surpassed by nothing anywhere in Britain, and hardly equalled out of Cornwall—'a strange wild land of stacks and skerries, of voes and geos, and of cliffs and caves,' with but few things to compare with the grand sweep of St Magnus Bay, as seen from the top of Sandness Hill, or with the cliffs of Foula. 'It would almost seem,' says Sheriff Rampini, 'as if the Shetland Islands had been specially prepared by nature to be the home of a Scandinavian people. None but the hardy Norsemen,

> "Whose house, of yore,
> Was on the foaming wave,"

would voluntarily have selected this desert of peat-moss and weathered rock—"this wilderness of mount and moor and moss, quhairin are divers great waters"—for his chosen resting place. For, after all, this "Old Rock," as its sons love to call it, is no land flowing with milk and honey, no Goshen, no Deseret, no Land of Promise, no

> "Emerald isles of Paradise
> Set in an azure sea."

The kindly fruits of the earth are conspicuous by their absence. There is never a tree on its whole surface, for the stunted specimens—twisted by the wind and lopped by the gales—which exist in some sheltered localities, scarcely deserve the name. It lies amidst boiling seas. Terrible tempests range round its coasts. There is scarcely a feal-thatched cottage within its bounds from which the cruel sea has not taken toll of its inmates. Sky, sea, and shore are too often of a dull leaden hue. Its climate is damp and humid. It has ten months of winter, says a facetious traveller, and barely two of summer. Its shortest day is only five and a half hours long. Still there are compensations. If there are dayless winters, there are also nightless summers. In the months of June and July darkness is unknown. The sun sets only to rise again. One can read small print at midnight, and the lark—"Our Lady's hen," as the country people used to call it—may be heard singing at one in the morning. So, too, though the winters are long, the cold is never intense. If the winter days are dark, the nights are illuminated with the brilliant rays of the Aurora Borealis. Above all, if nature has been chary in her gifts of luxuries to the rich—in the fruits and flowers of more genial and southern climates—she has made up for this in her

abundant supply of necessaries to the poor. Peats and fish and oil—fuel and food and light—are the heritage of every Shetland peasant. Thus, though in his lot there may be great poverty, there never can be, except by his own indolence and want of energy, actual privation. As for the scenery of this lone, northern land, it has a subtle charm which is all its own. It is only within the last few years that the attractions of the Shetland landscape have begun to be recognised. It was reserved for Sir Walter Scott, whose wonderful eye for the picturesque is not the least attribute of his genius, to discover its capability as a theme for graphic and picturesque description. But even Sir Walter himself failed to perceive wherein its principal charm lay. Grand and romantic as is the rock scenery of its western coasts, tender and touching as on a calm summer eve is the beauty of its quiet voes and solitary lochs, the true beauty of the Shetland landscape consists in its unequalled effects of light and shade. Other parts of Scotland can boast of as beetling crags, as solitary stacks, as gloomy caves, as peaceful beaches, as reposeful nooks as any to be seen within its limits; but none can approach it in the weird and splendid variety of its aerial aspects. Its gorgeous sunsets, its opaline dawns, the changing lights and shadows on its green hillsides, the diversified hues and colours of its seas, have a fascination and a spell which only those who have seen them can adequately understand. From these results the passionate attachment of the islanders to their native land—an attachment so intense and so deep-rooted as to produce at times, in the case of Shetland girls in domestic service in the south, a peculiar and aggravated form of nostalagia, known in the faculty by the name of *morbus islandicus*. From these, also, results that atmosphere of mystery and romance which has always gathered around the very name of Ultima Thule. What Britain was to Rome according to Lord Macaulay, in the days of Procopius, the Shetland Islands have always been to the rest of Scotland. Even if we discount the fertile products of local tradition and superstition—the legends of trows and elves and fairies, of giants and gay carles, of mermaids and seal-maidens, of *bokies* (bogies) and *grülies* (gruesome beings), of Niogles and water-horses, of Finns and ghosts and devils—in which the native mythology of the islands abounded, there still remains sufficient to satisfy the imagination of the most ardent lover of the marvellous. The works of the older travellers are full of the wonders of this distant and enchanted land. Brand, whose credulity was only equalled by his piety, has preserved for us a long list of the *ferlies* of which the Islands boasted in his day. On the top of a hill in Unst, he solemnly assures us, there was a hole, covered with a slate, down which a Dutch skipper let eighteen fathoms of rope, without finding a bottom. In the kirk-yard of Papa Stour was a gravestone which had floated ashore with a dead man tied to it. There was a gentleman's house at Udsta in Fetlar, where the needle turned to all the points of the compass. It was a well-known fact that no cats would ever stay in the island of Vaila. It was an equally well-known fact that not only were no mice found in the islands of Burra and Haskassey, but that earth taken from them and sprinkled in other places, would infallibly drive them away. Nor is the marvellous confined only to the soil. It attaches to its history as well. Few countries so limited in area can boast of so thrilling, so romantic—I was almost going to say—so pathetic a history; nor one which is so sharply defined in the various stages of its progress. Alike in its Pre-historic, its Heroic, its Feudal, and its Renascent age—although these are each and all of them an age later than in other parts of the Kingdom—it excites in us an interest entirely disproportionate to its territorial extent, while, at the same time, presenting us with almost typical representations of the social and political characteristics of these various phases of civilisation. And though the materials for its annals are meagre and few, consisting only of the mute records of the Brochs, the doubtful

SHETLAND ISLANDS.
British Miles.
1 2 3 4 5 6 7 8 9 10
2°
1°
60°
Yell Sound
Yell
FETLAR
Out Skerries
Whalsey
Mickle Roe
Papastour
Foula
Mousa
Sumburgh Head
LERWICK
ST MAGNUS BAY
BASS OF SCALLOWAY
Clift Sound
Colsay
Fitfull Head
Priest Stacks
Swenasetter
Guttrum
Houb Hill
Skelda Ness
Hillswick Ness
Eshaness
Ronas Hill
Ronas Voe
Burra Firth
Burra Voe
Sandwick
Quarff
Scalloway
Bressay Sound
Bard of Bressay
Noss Head
Score Hd.
Calbinsburgh
Eswick
Brough
Weesdale
Houl of Eswick
Hour Stack
Green Holm
Grief Skerry
Rumble
Whalsey Sound
Skaw Taing
Seatholm
Vaila Voe
Lunna Holm
Lunna Ness
Fish Holm
Sumburgh Hd.
Out Skerries
Bruray
Grunay
Housay
Vee Skerries
Ossa Skerry
Sarta
Darholm
Magnus
Eqalshay
Northdaven
Papa Sound
Bragaster
Hogaster
Sand Ness
Dale
Wats Ness
Flatabrugh
Valey I.
Priest Stacks
St Helens Hd.
Foula
Houb Hill
Swenasetter
Guttrum
Uave de Grind Rocks
Ramnu Stacks
Graveland Ness
Frideland Pt.
Greenholm
Steuriholm
Sand Voe
Little Wyn
Sandwick
Yell Sound
Skea Ness
Lumbu
Ronas Voe
Burra Ht.
Brya
Hosa Ness
Oddsta
Oddsta Hill
Oddsta Voe
Oddsta Ness
Oddsta Ness
Oddsta Voe
Oddsta Hill
Oddsta Ness
Oddsta Voe
Oddsta Hill
Oddsta Ness
Oddsta Voe
Oddsta Hill

testimony of Skaldic songs, and the stained and mutilated fragments of old charters and parchments, they have attracted the attention of antiquarians and scholars as the chronicles and archives of no other country have done.'

There are a large number of little brooks, many of which near their mouths contain good trout. There are also a large number of fresh water lochs, many of them of fair size. The principal are the lochs of Cliff, Watlee, Stourhoull, and Snarravoe in Unst; Gossa Water, Lumbister, Colvister, Vatsetter, and Kettlester in Yell; Papil Water in Fetlar; Moosa Water, Muckle Lunga Water, Tonga Water, Roer Water, Gluss Water, Eela Water, Punds Water, and Burraland Loch, in the N and NW of Mainland; Clousta Loch, Vaara Loch, Sulma Water, Burga Water, Lunga Water, Voxterby Loch, and Gossa Water in the centre (W) of Mainland; and Strom Loch, Tingwall Loch, Vatsetter Loch, and Loch of Spiggie in the centre and S. Formerly the fishing was poor, as every means legal and illegal was used to destroy the trout, but as Shetland was erected into a fishery district in 1883, matters will now be much improved. The close time extends from 10th September to 24th February, both inclusive; but the rod season lasts from 1st February to 15th November, both days inclusive. In many of the lochs the fishing is free, and for most of the others the necessary permission is by no means difficult to obtain.

The land area of the islands is 551·4 miles or 352,876 acres. The inhabited islands, with their populations in 1871 and 1881 respectively, are as follows:—Bound Skerry (2; 2), Bressay (878; 847), Burray, one of the Out Skerries (43; 59), East Burra (239; 215), West Burra (442; 427), Fair Isle (226; 214), Fetlar (517; 431), Foula (257; 267), Grunay, one of the Out Skerries (19; 25), Hascosay (4; 0), Hevera or South Havra (32; 35), Hildasay (3; 7), Holm of Papil or Papa (5; 4), Housay, one of the Out Skerries (71; 71), Langa, in Tingwall (7; 4), Linga, close to Hildasay (12; 10), Linga, N of Vaila (10; 13), Muckle Flugga (3; 3), Muckle Rooe (216; 230), Noss (24; 3), Oxna (29; 30), Papa (20; 14), Papa Stour (351; 254), Mainland (21,698; 20,821), Trondra (126; 133), Unst (2768; 2173), Uyea in Unst (9; 5), Vaila (11; 9), Whalsey (784; 870), and Yell (2732; 2529).

Shetland has a much more equable temperature throughout the year than most places on the mainland of Great Britain, the total average range of temperature being as in Orkney about 16°, while at Thurso it is 20°, at Leith 22°, and at London 25°. The general remarks made as to the temperature of Orkney apply equally here, except that the averages are from ·1° to ·2° lower, except for August, when they are higher in the same proportion. The variations of temperature are, however, very rapid, and even at midsummer wind from the N or NW causes a fall at once. The mean average rainfall is considerably above that of Orkney, being about 48·6 inches, and this dampness renders the climate unpleasant to strangers, though the natives do not seem to find it unhealthy. The prevailing winds are from NW to SW, and in autumn the gales from these quarters are so heavy as often seriously to injure the crops. Next in frequency are winds from N and NE, which are generally accompanied by settled weather, but though dry and healthy they are bitterly cold, and as they are common in spring they often check the progress of vegetation. The spring is thus generally cold and late, and can hardly be said to begin before the end of April, and there is but little real warmth till the middle of June, but from that time till summer terminates between the middle and end of September the growth of vegetation is very rapid. Sometimes sudden and dangerous gales occur about midsummer, and in one on 20 July 1881 ten 'sixern' boats belonging to the North Isles were lost and 58 persons drowned. The magnificent sum of £15,500 was raised by public subscription throughout Great Britain for the relief of the widows and orphans, and being much larger than was required a portion of it was set aside as the nucleus of a general Shetland Fishermen's Widows' Relief Fund for the relief of those left destitute by disasters at sea. Autumn extends to about the middle of October, and from that time till the end of March there is an almost constant succession of high winds and heavy rains. Fogs are frequent in May and June, and the few thunderstorms that occur generally break in winter during high winds and long-continued falls of rain or snow. Owing to the high latitude the summer evenings are long and in fine weather charming. At the longest day the sun rises at 38 minutes past 2 and sets at 33 minutes past 9; but even after his departure he leaves his glory behind in the bright glow of delicate tints of violet, yellow, and green that lie along the northern horizon. For a month at this season the light is so strong all night through that small print may be read without difficulty. At the shortest day the sun rises at 12 minutes past 9, and sets at 59 minutes past 2; but the long nights are often lit up by very brilliant displays of aurora borealis. Stray specimens of walrus that had wandered too far S have been seen on several occasions. The common seal and grey seal, which were at one time very numerous, are now greatly reduced in numbers; but schools of ca'ing whales are very common, no fewer than 1540, it is said, having been killed at Quendale Bay within two hours on 22 Sept. 1845; and solitary specimens of the razor-backed whale, the narwhal, and the manatee are known to have occurred. Among the birds of prey are the golden eagle, the white-tailed eagle, the osprey, the Greenland falcon, the Iceland falcon, the peregrine falcon, and all the common hawks, except the sparrow-hawk, which is rare, as are also the first three birds mentioned. Ravens are common, but rooks are rare, and grouse, though introduced, have never prospered. Among the rarer plants may be mentioned *cochlearia officinalis* at Out Stack; *ophioglossum vulgatum* and *polypodium dryopteris*, near Ordale House; *hymenophyllum Wilsoni*, at Skaw; *trientalis Europæa*, at Hermaness; *saxifraga oppostifolia*, at Sand Voe; and *nymphæa alba*, in a loch at the base of Ronas Hill.

Geology.—The geology of Shetland presents certain remarkable features which never fail to arrest the attention of visitors to those regions. The great development of the metamorphic crystalline rocks, containing an abundant series of minerals, has become widely known through the descriptions of Dr Hibbert and Professor Heddle; while the isolated masses of Old Red Sandstone, with their associated igneous rocks, give rise to much of the striking scenery along the seaboard.

Beginning with the stratified metamorphic rocks, they are divisible into two groups with well-marked lithological characters—(1.) dark blue and grey clay slates and schists, with occasional bands of limestone; (2.) coarse micaceous and hornblendic gneiss, with quartzites, chlorite-schists, mica-schists, and limestones. The members of the former group occupy a considerable tract on the Mainland, extending from the S promontory at Fitful Head, N by the Cliff Hills to Laxfirth Voe; while the more highly crystalline gneissose series covers wide areas in Tingwall, Weisdale, Nesting, Lunnasting, Delting, and along the E seaboard of Northmaven. Along the line of junction between these two groups, extending from Scalloway N by Tingwall Firth to Laxfirth Voe, the strata are generally inclined to the WNW; and hence, if we take the order of superposition as an index of the succession, we might naturally infer that the clay slate group represents the oldest members of the metamorphic series. Beds of limestone occur in this group at Ocraquoy and Fladabister, but their development is insignificant compared with the massive limestones of Tingwall and Weisdale. At Tingwall the massive limestones are overlaid by coarse micaceous and hornblendic gneiss, which is the prevailing rock in the centre of the Mainland, forming, indeed, all the great parallel ridges between Scalloway and Weisdale Voe, except the promontory between Whiteness Voe and Stromness Voe. Another great belt of limestone crops out in Weisdale Voe, and extends N to Dales Voe in

Delting. To the W of this limestone zone the strata consist of coarse micaceous gneiss, mica-schists, and quartzites, which, both in Weisdale and Delting, are inclined to the WNW and NW at angles varying from 60° to 70°. The metamorphic rocks that have become famous for the variety and beauty of the minerals contained in them, are to be found along the E seaboard of Northmaven, and on the Hillswick promontory between Sandwick and Urie Firth. The latter locality has been carefully explored by Dr Heddle, who has published detailed descriptions of the minerals in the *Mineralogical Magazine*. From his descriptions, and those of Dr Hibbert, it appears that the strata forming the Hillswick promontory consist of mica-schist, chlorite-schist, and hornblendic gneiss, pierced by numerous dykes and veins of pink quartz-felsite—evidently offshoots from the great intrusive granite mass so largely developed in Northmaven. Among the minerals found in the rocks on this promontory, the following may be mentioned: hornblende, actinolite, epidote, anthophyllite, precious serpentine, steatite, chlorite, kyanite, calcite, and fluor-spar.

Again, along the E seaboard of Northmaven, between Ollaberry and Fethaland Point, there are several excellent mineral localities in the metamorphic series. In Colafirth Voe, not far to the N of Ollaberry, the strata consist of chlorite-schist, margarodite-schist, hornblende rock, hornblendic-gneiss, serpentine with chrysotile, which are flanked on the W by the great granitic mass of the Biurgs. Perhaps the most interesting of the sections in this part of Northmaven occurs at Fethaland, where some beautiful minerals have been obtained. The peninsula of Fethaland is composed mainly of gabbro, a crystalline rock consisting of diallage and triclinic felspar. Above Kleber Geo excellent specimens of the former mineral are to be found. In this bay chlorite-schist, actinolite-schist, and steatite occur—indeed, the name Kleber Geo is given to this locality from the occurrence of steatite or soap-stone, which is termed 'Kleber' or 'Klemmer stone' by the Shetlanders. Many tourists purposely visit this locality, to examine the curious sculptures on the weathered face of the steatite, in the form of squares and circles. From this locality the following minerals have also been obtained: ilmenite, magnetite, pyrite, asbestos, and amianthus. Not far to the S, in Pundy Geo, Professor Heddle found a band of chlorite of singular beauty, containing octahedral crystals of magnetite.

The island of Yell is composed of coarsely crystalline gneiss with granite veins, the prolongation towards the N of the gneissose strata of the Mainland. Similar strata are met with in Whalsey and in the Out Skerries of Whalsey, but in the latter islets the gneiss is associated wlth crystalline limestone.

The metamorphic series in Unst and Fetlar presents several interesting features on account of the remarkable development of serpentine and certain minerals associated with it. The prominent ridge of high ground along the W coast of Unst is composed of gneiss, inclined to the SE, succeeded by mica-schist, chlorite-schist, and graphite-schist. The schistose strata overlying the gneiss are well developed in the hilly ground in the N of the island, between Burra Fiord and Norwick Bay. At Cliff a band of limestone is associated with these schists, which, however, has not been traced across the island. The graphitic schists pass underneath the serpentine at the S end of the island near Bellmont, and again on the E coast in Norwick Bay. The serpentine crosses the island from SW to NE, extending from the Gallow Hill near Bellmont to the Nivv Hill beyond Haroldswick Bay, varying in breadth from ¼ to 2 miles. It is widely known, on account of the veins of chromite found at Hagdale, which will be referred to under the section on Economic Minerals. Native copper and malachite have also been found on the S side of Haroldswick Bay, and at other localities asbestos, brucite, talc, magnetite, and arragonite have been obtained. There is one celebrated locality in this island where talc can be got of an exquisite apple-green tint—indeed, it would be difficult to obtain finer specimens of this mineral. The locality, which was discovered by Dr Heddle, is situated in the NE corner of Haroldswick Bay, in Quin Geo, where it is associated with dolomite, magnetite, and other minerals. To the E of this mass of serpentine there is a belt of gabbro, forming a parallel strip upwards of a mile in breadth, flanked on the E by chlorite-schists and mica-schists, exposed on the shore near Muness Castle. At the extreme SE promontory there is another small area of gabbro resembling that on the Vord Hill and on Balta Island.

The group of strata just described are continued towards the S in the island of Fetlar. In the centre of the island the chlorite-schists and graphitic-schists form a low arch, throwing off to the E and W gabbro, diorite, and serpentine. Along the W seaboard the gabbro and diorite are succeeded by coarse micaceous gneiss; while towards the E, in Gruting Bay and at Heilinabretta, the micaceous, chloritic, and graphitic schists again appear.

Only a passing reference can be made to the large mass of diorite in Northmaven, stretching from Mavis Grind to Roeness Voe, and to the remarkable epidotic syenite described by Hibbert near Loch Spiggie in Dunrossness, which is traceable through the islands lying to the W of the Cliff Hills to the Mainland at Bixetter.

The isolated relics of Old Red Sandstone still preserved to us in Shetland clearly show what an important development of this formation is to be found in those islands. Fossils are not very plentiful throughout the strata, but recently the remains of plants have been obtained at new localities in the neighbourhood of Walls, in altered sandstones and flags. This discovery has resulted in the addition of about 40 square miles of ground to the area occupied by the Old Red Sandstone.

Along the E seaboard of the Mainland the representatives of this formation occur at intervals between Rovey Head, N of Lerwick, to Sumburgh Head, and may be grouped in the following order:—

5. Flaggy series of Bressay.
4. Lerwick Grits and Sandstones.
3. Rovey Head Conglomerates.
2. Brenista Flags.
1. Basement breccia resting unconformably on the crystalline rocks.

The breccia forming the base of this formation on the E seaboard is seen only at a few localities owing to the existence of faults, which bring different zones into conjunction with the metamorphic series. In the neighbourhood of East Quarff, at Fladabister, and again near Loch Spiggie in Dunrossness, the unconformable junction is admirably seen, the breccia being composed of angular fragments of the underlying rocks. The red and chocolate coloured flags of the second subdivision are to be found capping the breccia between Fladabister and East Quarff, but the best exposure of them is to be found on Brenista Ness, where they are gently inclined to the E, and conformably overlain in Gulberwick Bay by coarse conglomerates belonging to the third group. The latter can be traced at intervals N to Rovey Head, situated about 2 miles N of Lerwick, where, by means of a fault, they are thrown against the crystalline schists. Resting on these conglomerates, and forming the hilly ground in the neighbourhood of Lerwick, we find a succession of grey massive sandstones and grits with shaly partings which occasionally yield plant remains in the quarries to the S of the town. The members of this group are followed in regular order by a great development of flags, shales, and thin-bedded sandstones of the island of Bressay, in which specimens of *Calamites Cannaeformis* have been found. An admirable section of the flaggy series of Bressay is to be seen in the great sea-cliff of Noup Head (477 feet), at the base of which certain dark shales with calcareous nodules occur, resembling the well-known fish-bed of the Moray Firth basin.

When we pass to the W side of the Mainland there is a remarkable change in the features presented by this

formation. Instead of an unbroken succession of sedimentary deposits, there is a striking development of contemporaneous and intrusive igneous rocks forming noble cliffs in Northmaven, Sandsting, and in Papa Stour. There can be little doubt that during the deposition of portion of the strata on the E side of Shetland volcanoes must have been active in the W area, discharging sheets of lava and tuffs which were spread over the sea-floor and buried underneath the accumulating sediments. But in addition to the volcanic materials ejected at the surface, there are extensive areas occupied by granite and felsite which were injected amongst the sedimentary deposits and crystallised at a considerable depth. Before indicating the areas where these igneous rocks occur, reference must be made to the tract of highly altered strata in Weisdale, Walls, Sandsting, and Sandness. Till the discovery of numerous plant remains in these altered strata in 1878 by Messrs Peach and Horne, they had been grouped with the metamorphic series of Shetland; but the nature of the plant remains, comprising specimens of *Psilophyton princeps* and *Lepidodendron nothum*, clearly showed that they are merely an altered portion of the Old Red Sandstone. This tract of altered strata is bounded by two great faults, one extending from Aith Voe in Aithsting to Selie Voe in Sandsting, and the other from the island of Papa Little, by Clouster Voe, Burra Firth, to Sandness Hill. There is a small patch of sandstones and shales at Melby resembling the unaltered beds on the E seaboard.

The contemporaneous lavas and tuffs associated with this formation occur at several localities on the W side of the Mainland. The best exposure, however, is to be found in Northmaven between Stenness and Ockren Head, where they are thrown into a synclinal fold, the axis of which runs in a N and S direction from Stenness by Hamna Voe to the mouth of Roeness Voe. On the S side of the latter sea-loch they are brought into conjunction with a great intrusive sheet of pink felsite by a fault which is admirably seen on the sea-cliff. Similar interbedded lavas and tuffs are to be found at various points round the shores of Papa Stour, where they are overspread by a later sheet of pink felsite. A bed of diabase porphyrite is to be found in the Holm of Melby, close to Papa Stour, while at Clouster Voe in Aithsting, on the Mainland, there are dark green diabase lavas associated with the indurated flags and shales. The only relic of these interbedded rocks on the E seaboard occurs on the E shore of Bressay, where a thin band of tuff is intercalated between the flagstones. Interesting as these volcanic ejectamenta doubtless are, there are still more striking manifestations of the volcanic activity which characterised that period, presented to us in the form of sheets, dykes, and necks. Of these, the intrusive sheets are the most important, as they cover large areas in Northmaven and Sandsting on the Mainland, a great part of Meikle Rooe, a portion of Vementry, and nearly the whole of Papa Stour. The masses in Northmaven, Sandsting, Vementry, and Meikle Rooe consist of coarse granite composed mainly of pink orthoclase, felspar, and quartz, with only a small quantity of mica, while the great sheet in Papa Stour is made up of pink spherulitic felsite. On the E shore of Bressay and in the island of Noss there are traces of old volcanic vents or necks from which some of the igneous materials were discharged.

The glacial phenomena of Shetland are of special interest on account of the evidence in favour of a remarkable extension of the Scandinavian ice sheet in the North Sea during the primary glaciation. From recent researches it would appear that along the E seaboard of the Mainland and in Whalsey, the Outskerries of Whalsey, Yell, and Unst, the general trend of the glacial striæ is W, WSW, SW, and, in certain instances, SSW. But when we cross to the W side of the Mainland the direction of the ice-markings swings round to the NW and NNW. These are supposed to have been produced by the Scandinavian ice sheet crossing the islands towards the Atlantic during the primary glaciation. A detailed examination of the boulder clay sections on the W side of the Mainland and in the N islands points to the conclusion that stones have been transported in the *moraine profonde* from the E to the W of these islands. For instance, blocks of serpentine and gabbro derived from the E side of the Vallafield ridge in Unst are found in the boulder clay on the W coast, while striated blocks of flags and grits derived from the E side of the Mainland between Lerwick and Dunrossness are also found in this deposit on the W coast. These facts evidently point to an ice movement from E to W, but there are also certain data which point to a later glaciation, when local glaciers radiated from the more elevated parts of the Mainland and the N islands. During this period the direction of ice flow between Lerwick and Dunrossness was towards the SE, when certain morainic deposits were accumulated containing fragments of slates from the Cliff Hills.

Economic Minerals.—Some of the mineral localities in Shetland have been indicated in the foregoing article, but there are certain mineral veins demanding special notice. In Unst a valuable vein of chromite occurs in the serpentine on the SE slope of the Heog Hills. According to Dr Heddle this vein has yielded thousands of tons of ore, and runs in an E and W direction, not continuously but in irregular 'bunches,' throwing one or two offsets near Buness. The chromite at Hagdale is associated with Emerald Nickel, Arragonite, Kammererite, and Williamsonite. Another important vein of ore occurs at the Sandlodge mine on the Mainland, from which is obtained sparry carbonate of iron, or chalybite and copper pyrites. With these are associated native copper, limonite, chalcopyrite, fibrous malachite, and psilomelane. According to Hibbert there is evidence of the presence of magnetic iron in a small hill in Whalsay proved by the deflection of the magnetic needle. Magnetite also occurs at Fethaland Point on the Mainland, and at Osta in Fetlar. Iron pyrites occur at Garthsness and at Fethaland. Excellent building stone is obtained from various members of the Old Red Sandstone on the E side of the Mainland, especially from the Lerwick grits and sandstones.

Soils and agriculture.—The soil is of much the same nature as in Orkney, but there is less inducement to cultivate even the good alluvial soil along many of the voes in consequence of the damp and stormy climate. There is in Mainland and Unst a considerable extent of peat-moss, which is cut for fuel; but this has been done in many cases so injudiciously that the heavy rains have washed away the whole of the lower soil. The mosses abound in roots and stems of trees, which show that the islands have not always been in their present treeless condition. The land is held as in Orkney, the original udal tenure having now in the majority of cases been converted into feudal holding by the same causes as are noticed in the article on the Orkney Islands. At Tingwall and Dunrossness, and in Bressay, Whalsey, and Unst, there are some good farms—one in Bressay indeed being almost as early as any farm in the north of Scotland—'but the uncertainty of the returns from the grain crops is a great bar to extensive agricultural projects, and the feeling is yearly gaining ground that improvement of land should proceed in the direction of grazing and green crops. The harvest in average years is generally so late, and the weather so uncertain, that crops which promise all that could be wished to-day, are, to-morrow, blackened and blasted by an unexpected change to rain, sleet, or snow. No single cause, however, is so injurious as the drift which, in stormy weather, is blown from the sea over the land, carrying ruin in its train.' The rest of Mainland and by far the greater part of Yell is pasture or peat-moss; and Unst and Fetlar, which are noted for the production of butter, abound in excellent pasture land, there being almost no moss. The small average size of the holdings, the want of roads, rents paid till recently in kind, and the many exactions piled on tenants by the crown donatories or their tacksmen all operated against any improvement in Shetland agriculture, and just as in the case of Orkney and the failure of the kelp trade, so in

Shetland such slight improvement as has taken place is due to the failure of the potato crop in 1847-49. The small holdings still operate against improvement, more than half of the arable land being held by crofters—and by crofters too who, looking on a croft and its accompanying scathold or right to hill-grazing as an absolute necessary of existence, yet cannot possibly, like their Orcadian brethren, exist by agriculture alone, but look to the sea to supply their chief means of living. The fundamental idea on which the old system of agriculture was based was the 'toun' or township, the nature of which has been already sufficiently indicated in the article on Orkney; but in Shetland it is much more of a living power than in the other group of islands, and runrig itself is not yet altogether a thing of the past. The tillage is mostly done by the long-handled spade, and the only crops are oats, bere, and potatoes, the latter occupying about a fourth of the holding, which averages from 3 to 10 acres. There is no rotation, and land is rarely, if ever, allowed to lie fallow. The only manure is sea-weed or large quantities of peat-earth that has been used for bedding cattle. Hay is practically unknown. Potatoes became a common article of diet about the middle of last century, and the few turnips grown are for domestic use only. Cabbages, which were introduced by Cromwell's soldiers, are kept during winter in small walled patches called plantie-cruives, and transplanted in summer.* The first step to any improvement in such cases must be by a division of the scatholds, and this has in many cases been already accomplished. Of a total of 3839 holdings, 3765 were of 50 acres or under, 34 between 50 and 100, 30 between 100 and 300, 7 between 300 and 500, and 3 over 500; and the average area of the smaller holdings was $9\frac{3}{4}$ acres. The ground under crop and permanent pasture rose from 50,454 in 1870 to 58,383 in 1884. The acreage under the various crops at different dates is given in the following table :—

Year.	Barley or Bere.	Oats.	Turnips.	Potatoes.
1866	2139	8695	347	2609
1874	2398	8606	505	2831
1882	2610	8123	869	3313
1884	2531	7789	1066	3344

while about 200 acres are annually under other green crops; about 1000 acres on the large farms are allowed to lie fallow; and there are 41,649 acres under permanent pasture.

The agricultural live-stock in the county at different dates is shown in the following table :—

Year.	Cattle.	Horses.	Sheep.	Pigs.	Total.
1868	20,255	..	73,506	5385	..
1874	21,683	5951	86,718	4853	119,205
1882	21,345	5305	81,163	3788	111,601
1884	22,373	5345	84,003	3753	115,474

The cattle, which seem to be descended from Norwegian animals, are small, and somewhat resemble Alderneys. They are well shaped and flossy, and when fattened weigh from 2 to 3 cwt. They are thoroughly suited for a country where the grazing is poor; are good milkers when well fed; and their flesh forms tender and finely flavoured beef. The sheep are, like the native sheep of Orkney and the Hebrides, small animals of

* 'The liberal custom of the country,' says Sir Walter Scott, 'permits any person who has occasion for such a convenience to select out of the unenclosed moorland a small patch, which he surrounds with a dry-stone wall, and cultivates as a kail-yard, till he exhausts the soil with cropping, and then he deserts it and encloses another. This liberty is so far from inferring an invasion of the right of proprietor and tenant that the last degree of contempt is inferred of an avaricious man when a Zetlander says he would not hold a *plantie-cruive* of him.'

Scandinavian origin, but as bones of similar animals are found in the brochs, they must have been introduced into the island before the Norwegian occupation. Though small they are very active and even intelligent, and their wool is noted for its fine quality, the best of it being moorat, *i.e.*, yellow brown in colour. The animals are not shorn in the usual way, but the fleece is removed by 'rooing' or plucking. The finest wool is procured from the neck and shoulders. The mutton is excellent. Considerable numbers of black-face, Cheviot, and half-bred sheep are now, however, to be found in various districts. The 'horses' are the well-known Shetland ponies, from 9 to 10 hands high, and the best animals are black, bay, or iron-grey in colour. They are supposed also to have a Scandinavian origin, and to owe their dwarfed condition to neglect and hard living, for they are seldom or never admitted within the walls of a building; and, ranging about in herds in a half wild state over the commons and hills, they have to find their own food both winter and summer. A considerable number are said to perish every winter from exposure and hunger, but this seems to weed out the weak specimens, and the animals, which are in great demand for children, as well as for work in coal pits, are strong, spirited, and enduring far beyond the proportion of their bone and bulk. They do not reach maturity till about eight or nine years old, and till they are three or four their bodies are covered with long woolly-looking hair. The pigs, like all the other domestic animals of Shetland, are small and peculiar. They have small bones, erect and pointed ears, and very strong snouts. The back is short and arched, the legs long, and the body covered with long bristly hair, varying in colour from dunnish white to black, and from which formerly the ropes used by the cragsmen on the 'banks' were made. They are hardy and active, and as they are generally allowed to run about wild, they do a great deal of mischief, especially where the soil is sandy. Poultry of all kinds, particularly geese, are extensively kept, and the annual exports of eggs alone are worth probably nearly £30,000 a year. In 1884 the number of turkeys in the islands was 86, of geese 4463, of ducks 7368, and of fowls 37,113.

Industries.—Fish of all kinds are plentiful round the shores of the islands, and for centuries the great mainstay of the Shetlanders was the ling or haaf (Scand. *hav* or *haaf*, 'the deep sea') fishing, but of late years the herring fishing has been so enormously developed, as to throw the haaf fishing quite into the shade. The herring fishing in the Shetland seas was practically in the hands of the Dutch fishermen till the early part of the 18th century, when a French fleet destroyed a large number of their busses, and the field began to be left open to home enterprise. During the Napoleonic wars the Hollanders had to keep away from their old ground, and advantage was taken of the opportunity by the proprietors along the coast to get the fishings into their own hands, each of their crofters being bound as a condition of his tenancy to assist in fitting out and manning a boat, as well as to assist or provide assistance in curing operations. Proprietors who were non-resident, or did not care to embark in the fishing, leased their rights and privileges to fish-curers, and as both classes set up shops for the supply of their tenants, goods being given in exchange for produce and work, this was really the origin of what is known as the Truck System of Shetland, which was investigated by a Government Commissioner in 1872, and which the force of public opinion has now almost, if not altogether, stopped, much to the welfare of the Shetland fishing community. The Dutch have never recovered their old hold, though a large number of booms and luggers still make their appearance every year. These gather in Bressay Sound, and during the period that intervenes between their arrival and St John's Mass when they begin to fish, the sailors land at Lerwick and hold high festival, pony-riding affording great amusement, both to themselves and to those who have the good fortune to witness their brilliant exploits in horsemanship (see

the account of this in Campbell's pamphlet on the *Great White Herring Fishery*, and in Dr Kerr's *Shetland and the Shetlanders* in *Good Words* for 1866). From 1834 to 1842 the boats engaged in the Shetland herring fishing were about 1100 annually, but as the average catch over the whole fleet was sometimes as low as 5 barrels, and never during that period more than 60, the number gradually diminished, till, in 1874, only 96 boats were here so employed, the total catch being 1180 barrels; by 1879 the number of boats had increased to 206, and the catch to 8755 barrels; while in 1880 with 217 boats the catch was 48,552 barrels; in 1882 with 372 boats the catch was 134,187 barrels; and in 1883 with 807 boats 256,664 barrels. The boats are gathered from all the fishing ports on the N and E coasts, as well as from England, Ireland, and the Isle of Man, and they are scattered round the islands at about 100 different stations, the chief of which are Lerwick and Balta Sound. The great development of the industry since 1875 seems to be due to the introduction of first-class decked boats in place of the old 'sixern' or six-oared boats used by the Shetland fishermen. These—lineal descendants of the lang-schip of the Vikings—were about 20 feet in the keel, 6½ wide, and 3 deep. They carried a lug-sail, containing about 60 yards of canvas, and though the Shetlanders managed them with the greatest skill, and would even venture in them in rough weather long distances from land, they were quite helpless in gales. In 1877 there were 3 decked boats belonging to the island, and by 1882 the number had risen to 77. Shetland forms one of the Scottish fishery districts, and there were, belonging to the islands in 1883, 654 boats, employing 3064 resident fisher men and boys. The principal stations for first-class boats were Lerwick with 45, Whalsey with 14, and Burra with 14; for second-class boats, Dunrossness with 13, Levenwick with 11, Whalsey with 11, Out Skerries with 14, Gloup with 12, Fethaland with 16, Stennis with 24, and Papa Stour with 10; and for third-class boats, Dunrossness with 50, Vaila with 16, Scalloway with 18, Bigton with 10, Quendale with 16, Foula with 12, and Fair Isle with 13. The boats were valued at £34,096, the nets at £23,074, and the lines at £5200; and the total number of persons employed in connection with them, inclusive of fishermen, was 5654. The deep-sea fishing was in the hands of German merchants down to 1712, when a high duty imposed on imported salt and the establishment of a custom house at Lerwick proved fatal to their interests. The fish caught are cod, ling, and tusk, the latter a white and flaky-fleshed fish, never seen S of the Moray Firth, and more plentiful on the E side of Shetland than on the W. The dried cod goes to Spain, and the ling to Ireland, but the tusk is mostly used at home. Nearly one-half—sometimes nearly two-thirds—of the total quantity of cod, ling, and hake captured in the whole of Scotland come from Shetland, the number of fish having in 1883 been 1,617,262 out of a total for the whole of Scotland of 3,620,207. Besides boats, 40 smacks, with a total tonnage of 1932 tons, and employing 468 men, were engaged in the fishing, the number of fish thus caught being 625,309, weighing 14,934 cwts. The smack fishing is carried on about the Faroe islands and Iceland. Conger, skate, and halibut (locally turbot) are also caught, and in 1876 boxes of these packed in ice began to be sent to the south markets. In that year the fresh fish so exported amounted to only about 60 cwts., but in 1878 the amount was 300 cwts.; in 1879, 1000 cwts.; in 1880, 6000 cwts.; in 1881, 10,000 cwts.; at or near which figure it has since remained. Many of the fishermen also sail with whaling and sealing ships to the Davis Strait and Greenland whale and seal fishings, joining the vessels at Lerwick. A small quantity of kelp is still made along the shores of Yell Sound, but besides the fishing the great Shetland industry is the knitting of woollen articles from the fine worsted yarn made from the wool of the native sheep. The manufacture of coarse stockings, gloves, and nightcaps has long been carried on, and an extensive trade is done every year with the Dutch and German fishermen. When trade with Leith was developed the articles were sent to that port, and so great was the success of the industry that in one of the early years of the present century the stockings alone that were exported were estimated to be worth £17,000. The manufacture of shawls was introduced in 1837-39, and the demand for them became common in 1840. In 1850 veils were introduced, and since then neckties and various fancy articles have been tried. The amount sold averages from £10,000 to £12,000 yearly. Each district has a special 'line,' Northmavine producing underclothing; Westing, stockings; Walls and Sandsting, socks and small shawls; Whiteness and Weisdale, fancy coloured gloves; and Lerwick, shawls and veils. The fine, soft and light but very warm Shetland flannel or tweed is manufactured in Northmaven, Delting, and Lunnasting. The commerce is noticed under LERWICK, as is also the means of communication with the mainland. Internal communication, though greatly improved since the end of last century, when there were practically no roads, still leaves much to be desired.

The old miserable, windowless, chimneyless hut, with the byre forming the antechamber to the family dwelling room, has now almost disappeared, and in most cases the byre is a separate building, while the cottage, poor and thatched though it be, has a 'but' and a 'ben,' the latter generally floored, but the former with clay floor, and very often still without a chimney. The inhabitants retain many of the old Scandinavian peculiarities of character as well as feature and complexion. The men are a fine powerful race, with an active swinging walk, and though they possess much hardihood and power of physical endurance, they are gentle in their manner and style of speech. Their acquaintance with the perils of the deep and the risks incident to egg-gathering lead to the same cool and matter-of-fact way of treating danger and death that has been already remarked on in the article on Orkney. They are markedly religious, hospitable, and outwardly courteous, but one who is well acquainted with them finds more underneath, and in many cases it seems as if Scott's opinion of 'jimp honest' were no calumny, and that this is so is probably due to the long period of oppression they had to endure after the islands were annexed to the Scottish crown, as well as to the false system which eventuated in the quasi-truck system, and which was strongly calculated to produce hypocrisy. To the same cause is probably to be assigned the Shetlander's horror of law and lawyers, as well as his intense dislike to bind himself by any written obligation. The dislike for Scotland and the Scotch, produced by the oppressions of the mediæval lords of the islands, has also lingered to our own time and seriously retarded the progress of the islands, though probably not many are of opinion with the sailor mentioned by Dr Kerr, that the mainland has never given them anything but 'dear meal and greedy ministers.' A fisherman who has a farm, the Shetlander retains all that reverence for the marvellous that seems peculiar to sea-faring folk. 'He still occasionally sees krakens, sea-serpents, and other monsters of the deep. Although, of course, he does not believe in them, he still dislikes to talk about trows and fairies, mermen and mermaids, ghosts, apparitions, and warnings. . . . He still regrets the change from the Old Style to the New, the growing indifference to the observance of old holidays and customs, the transformation of the old Norse festival of Yule, with its blazing tar-barrels and its companies of straw-clad Guizers, its Yule bread, its lighted candles, and all its quaint and antique rites, into the modern Christmas with its preaching and singing of hymns.' In short, he is in a transition period, and with the shame-facedness that belongs to it, though he no longer believes in witches, in charms and incantations, lucky and unlucky days, he has still a lingering reverence for all these things, and has in consequence a sort of uncomfortable feeling that those who laugh at all the lore that his forefathers believed, and all the customs that they

observed, are scoffing at really sacred things. The language is soft and almost lisping, *th* being always sounded as *d;* the second person singular is used in address; and though the old Norse tongue—which lingered here lovingly in Foula and Unst down to the beginning of the present century—is not now even understood, the dialect is so full of Norse words that it sounds to strangers as if it were a foreign tongue. The place names belong to the same language, and though there are many Scotch family names to be found, by far the greater number of these too are of Norse origin.

The only town is Lerwick, and the only village of any size, Scalloway, but there are a large number of hamlets for which reference may be made to the parishes. According to the *Miscellaneous Statistics of the United Kingdom* (1879) 305,383 acres, with a total gross estimated rental of £33,559, were divided among 549 proprietors, five together holding 126,154 acres (rental £9543), seven 88,940 (£8156), two 10,000 (£999), eleven 38,310 (£3215), seven 9975 (£795), nineteen 13,053 (£1307), sixty-four 13,290 (£2052), etc.

The principal mansions are Brough Lodge, Buness House, Busta House, Garth House, Lunna House, Melby House, Reawick House, Sandlodge, and Sumburgh House. The islands are divided into the twelve entire *quoad civilia* parishes of Unst—which includes Balta, Huney, Haaf Gruney, Uyea, Sound Gruney, and a number of smaller islets and skerries; Fetlar and North Yell—which includes the N end of Yell, Linga, Fetlar, Urie Lingey, Daaey, and some smaller skerries; Mid and South Yell—which includes the S end of the island of Yell, Hascosay, Orfasay, Bigga, and Uynarey; Northmaven—which includes all the NW part of Mainland with Uyea, Gruney, Muckle Holm, Lamba, and some smaller islets; Delting—which includes on the E the islands of Brother, Little Roe, Samphrey, Fish Holm, Linga, and Wether Holm, and on the W, Muckle Rooe and Linga; Walls, S of St Magnus Bay—which includes Papa Stour, Holm of Melby, Vaila, Linga, and Foula; Sandsting, SE of St Magnus Bay—which includes Vementry, Papa Little, West Isle of Burrafirth (all in St Magnus Bay), and Stonda Stour in The Deeps and the skerries to the N of it; Nesting—which includes Lunna Holm, Whalsey and all the islands round about including the Out Skerry group, and all the coast islets S to South Isle of Gletness; Tingwall—which includes Greena, Flotta, Hoy, North Havra, Hildasay, Linga, Langa, Cheynies, Oxna, Green Holm, and Trondra; Lerwick; Bressay—which includes the Isle of Noss and all the islets round about, part of the mainland between East Voe of Quarff and Clift Sound, and the islands of East Burra, West Burra, Papa, South Havra, and Little Havra; and Dunrossness—which includes Mousa, Muckle Bard, Lady's Holm, Horse Island, and Fair Isle. The *quoad sacra* parishes of North Yell, South Yell, Whalsey, and Skerries (Nesting), Quarff (Bressay), and Sandwick (Dunrossness) are also included.

There are Established churches within all the parishes and *quoad sacra* parishes, and there are also mission stations at Ollaberry (Northmaven), Olnafirth (Delting), Lunna (Nesting), Sandness and Papa (Walls), Whiteness (Tingwall), and Fair Isle (Dunrossness). There are 10 places of worship in connection with the Free Church; 4 in connection with the United Presbyterian Church; 7 in connection with the Congregational Church; 7 in connection with the Wesleyan Methodist Church; 5 in connection with the Baptist Church; and 1 in connection with the Episcopal Church. In the year ending September 1883 there were in Shetland 67 schools, of which 61 were public. Shetland, with a constituency of 459 in 1884-85, unites with Orkney in returning a member to serve in parliament. The islands have the same lord-lieutenant and vice-lieutenant as Orkney, but they have 8 deputy-lieutenants and 41 justices of peace of their own. They form a division of the sheriffdom of Caithness, Orkney, and Shetland, but have a separate sheriff-substitute resident at Lerwick. Ordinary sheriff courts are held at Lerwick every Wednesday during session; a sheriff small debt court, formerly held at Burravoe, is now discontinued. Justice of peace, ordinary, and small debt courts are held at Lerwick as occasion requires. The average number of registered poor in 1883 was 942 with 252 dependants, and of casual poor 33 with 23 dependants. The parishes propose to form a combination and erect a poorhouse. The average of pauper lunatics is high, being 27·6 per 10,000, while the ratio for the whole of Scotland is 23. The proportion of illegitimate births averages about 5 per cent., and the death-rate about 16·4 per 1000. Valuation (1674) £2288, (1843) £19,929, (1874) £33,176, (1884) £44,098, (1885) £45,730. The civil and registration counties are identical. Pop. (1801) 22,379, (1811) 22,915, (1821) 26,145, (1831) 29,392, (1841) 30,558, (1851) 31,078, (1861) 31,670, (1871) 31,608, (1881) 29,705, of whom 12,656 were males and 17,049 females. The great discrepancy of the sexes is caused by many of the men having been away at distant fishings at the period when the census is taken. In 1881 the number of persons to each square mile was 54, the number of families 6183, the number of houses 5444, and the number of rooms 12,251. Of the 29,705 inhabitants, 371 males and 139 females were connected with the civil or military services, or with professions; 57 men and 1118 women were domestic servants; 710 men were connected with commerce; 5024 men and 941 women were connected with agriculture and fishing; and 1367 men and 4648 women were engaged in industrial handicrafts, or were dealers in manufactured substances. Of those connected with farming and fishing 2476 men and 939 women were concerned with farming alone, and 2016 farmers employed 29 men, 3 boys, 8 women, and 10 girls.

Ecclesiastically the whole of Shetland is embraced in the Synod of Shetland, which contains the presbyteries of Lerwick, Burravoe, and Olnafirth. It meets at Lerwick on the second Wednesday of July. The presbyteries are separately noticed. The Free Church has also a synod of Shetland, containing, however, only one presbytery of the same name, and including charges at Cunningsburgh, Delting, Dunrossness, Fetlar, Lerwick, Hillside (Unst), Uyea Sound (Unst), Walls, Weisdale, and Yell.

History.—The name is derived from the Scandinavian Hjaltland—or 'high-land'—whence Hjatland, Zetland, and Shetland. The history is so largely identified and intermixed with that of Orkney, that the outline given in dealing with that group is in great measure applicable to both. In 1195 the lordship of Shetland became separated from that of Orkney in consequence of the rebellion of Jarl Harald against Sverrir, King of Norway, and the two were not again united till the grant by King Hakon to Henry St Clair in 1379. During the interval the islands are in the happy condition of having no history except what may be connected with the forays of the Vikings that frequented their bays and sounds; and yet it was during this period that the Norseman, with all his ways, took firm root here, and laid the foundation of all the peculiarities of the Shetlander of the present day. Gifford, who wrote in 1733, draws indeed a melancholy picture of the state of the islands during this period under the direct rule of the Kings of Norway, but whence he procured his materials is very doubtful. If any really exist they must be in the archives at Bergen. 'The poor udallers,' he says, 'were miserably oppressed by the governor or Foud and kept under, being forbidden all sort of commerce with foreigners, as the subjects of that king are to this day in Faro and Island: so there was no such thing as money amongst them; and what they had of the country product more than paid the corn rent, they were obliged to bring to the governor, who gave them for it such necessaries as they could not be without, and at what prices he had a mind, wherewith they were obliged to rest content, having no way to be redressed. Kept under this slavery they were miserably poor, careless, and indolent, and most of their young men, when

grown up, finding the poor living their native country was likely to afford them, went abroad, and served in foreign countries for their bread, and seldom or never returned: so that these Islands were but thinly inhabited'—an excellent lesson this last for the Highland and Island crofters. After the islands passed under the sway of the Scottish kings the government was still more oppressive, as Crown donatory after Crown donatory, 'looking on them as a milch cow to be squeezed for their own especial benefit,' laid heavier and heavier imposts on the long suffering people, and it is to this time that the old hatred of Scotland and the 'ferry-loupin' Scots is to be traced. The history during this whole period and down to 1766, when Shetland was sold by the Earl of Morton to the ancestor of the Earls of Zetland, is simply one long tale of oppression (see SCALLOWAY). During the 18th century the government was based on a series of 'Country Acts' applicable to this stewartry, and passed with consent of the heritors and kirk-session. They are excellent specimens of good old grandmotherly legislation, providing among other things that all persons should punctually attend the diets of catechising; that no person should 'flight' with or provoke his neighbour; that no servant should disobey his or her master's or mistress's lawful commands, or use provoking and unbecoming language towards them; that no one should keep more servants than they had absolute need for; that none should marry who had not £40 Scots of free gear to set up house on, or a lawful trade whereby to subsist, and so on, all the enactments being enforceable by fine or 'personal punishment;' and besides this, the Rancelmen or balifs had the power of inquiry into all domestic relations, as well as the highly important duty of finding out all witches and persons using charms. In 1817 the eminent French savant, M. Biot, carried on experiments with the pendulum at BUNESS, and was much struck by the simplicity of life and freedom from excitement enjoyed in this northern land. 'During the twenty-five years,' he says, 'in which Europe was devouring herself, the sound of a drum had not been heard in Unst, scarcely in Lerwick; during twenty-five years the door of the house I inhabited had remained open day and night. In all this interval of time neither conscription nor press-gang had troubled or afflicted the poor but tranquil inhabitants of this little Isle. The numerous reefs which surround it, and which render it accessible only at favourable seasons, serve them for defence against privateers in time of war; and what is it that privateers would come to seek for? If there were only trees and sun, no residence could be more pleasant; but if there were trees and sun everybody would wish to go thither, and peace would exist no longer.' In 1818 Captain Kater conducted similar experiments in the same place. The title of Earl of Zetland in the peerage of the United Kingdom was granted, in 1838, to Baron Dundas of Aske. The present—the third—earl, born in 1844, succeeded his uncle in 1873, but his estates in Shetland are not of very large size. His Scottish seats are at Kerse House, Stirlingshire, and Dunbog, Fifeshire. The antiquities of the Shetland Islands are numerous and interesting, and the brochs or burghs, cairns, castles, and old churches will be found noticed either under the islands or parishes in which they are. Some of the more important are treated separately.

See also Brand's *Brief Description of Orkney, Zetland, etc.* (1683; reprinted 1701; and again, Edinb. 1883); *A Voyage to Shetland* (1751); *A True and Exact Description of the Island of Shetland* (Lond. 1753); *An Account of the New Method of Fishing practised on the Coasts of Shetland* (Edinb. 1775); Neill's *Tour through some of the Islands of Orkney and Shetland* (Edinb. 1806); Arthur Edmondston's *View of the Ancient and Present State of the Zetland Islands* (Edinb. 1809); Peterkin's *Notes on Orkney and Zetland* (Edinb. 1822); Hibbert's *Description of the Shetland Isles* (Edinb. 1822); Sibbald's *Description of the Islands of Orkney and Zetland, by Robert Monteith of Egilsea and Gairsay in* 1633 (Edinb. 1845); Balfour's *Oppressions of the Sixteenth Century in the Islands of Orkney and Zetland* (Bannatyne Club, Edinb. 1859); two papers on 'Shetland and the Shetlanders' by Dr. John Kerr in *Good Words* for 1866; Thos. Edmondston's *Shetland Glossary* (Edinb. 1866); Reid's *Art Rambles in Shetland* (Edinb. 1869); Saxby's *Birds of Shetland* (Edinb. 1874); *Shetland Fireside Tales* (Edinb. 1877); Cowie's *Shetland* (Aberdeen, 1879; 3d ed., 1880); Gifford's *Historical Description of the Zetland Islands in the year* 1733 (Edinb. 1879); Low's *Tour through the Islands of Orkney and Shetland in* 1774 (Kirkwall, 1879); articles by Karl Blind on the Folklore of the Islands in the *Nineteenth Century*, in the *Contemporary Review*, and in the *Gentleman's Magazine* for March 1882; papers by Dr M. F. Heddle in the *Magazine of the Mineralogical Society*, and by Messrs Peach and Horne in the *Quarterly Journal of the Geological Society* for 1879 and 1880, and in the *Proceedings of the Royal Physical Society of Edinburgh* for 1878-80; Tudor's *Orkneys and Shetland* (Lond. 1883); and Rampini's *Shetland and the Shetlanders* (Kirkwall, 1884).

Shettleston, a parish containing a small town of the same name, in the Lower Ward of Lanarkshire, immediately to the E of Glasgow. It is bounded N and NE by the parish of Cadder, E by Cadder and Old Monkland, S by Rutherglen, W by Calton and Barony, and NW by Springburn. Except on the S, where the line follows the centre of the Clyde for about 2 miles downward from the E side of the grounds of Easterhill House, the boundary is almost entirely artificial. The greatest length of the parish, from the E end of Bishop Loch west-south-westward to the western limit of the parish in the eastern suburbs of Glasgow, is 4¼ miles; the greatest width, from the S corner of the policies of Easterhill House northward, is 3¼ miles; and the area is 5174·674 acres, of which 123·710 are water. The surface is undulating, and the height above sea-level rises from 70 feet in the E to over 300 at a number of places to the N and E, the highest point, N of Barlanark House, being 337 feet. The soil is mostly a good sound loam, and the underlying rocks belong to the Coal-measures forming part of the rich mineral field of Lanarkshire. The greater part of Frankfield Loch (2 × 2 furl.) lies within the parish on the N, and the whole of Hogganfield Loch (3 × 2 furl.) on the NW. The chief mansions are Barlanark House, Cardowan House, Carntyne House, Craigend House, Easterhill House, Frankfield House, Gartcraig House, Garthamlock House, Greenfield House, Haghill House, Tollcross House, and West-thorn House. The chief prison for the county of Lanark is at Barlinnie, in the NW of the parish. Shettleston is traversed by two of the main roads between Edinburgh and Glasgow, while the road from Glasgow to Stirling by Cumbernauld and Denny passes along the north-western border. It also includes a portion of the sections of the North British railway system which pass from Glasgow to Edinburgh, *viâ* Bathgate, and from Glasgow to Bothwell; and a reach of the Monkland Canal. There is a station at Parkhead, and another where the two railway lines branch off at the town of Shettleston. Besides the post-town of the same name the parish contains also part of the eastern suburbs of Glasgow, the greater part of the conjoint villages of Millerston and Hogganfield, almost the whole of Tollcross, and a few small hamlets. The town of Shettleston, which includes the suburbs of East Muir and Sandyhill, has a station 3 miles E by S of Glasgow, and is a somewhat dingy and poor place, inhabited chiefly by colliers and agricultural labourers. A water supply was introduced from the Glasgow mains in 1869. There is a post office under Glasgow, a parish church, a Free church, a Roman Catholic church, and a public school, but none of them call for particular notice. Pop. of town (1861) 1947, (1871) 2418, (1881) 3608, of whom 1753 were males and 1855 females. Houses (1881) 748 inhabited, 184 uninhabited, and 10 being built. The other villages are separately noticed.

The parish, which was originally a part of Barony parish from which it was civilly disjoined in 1847, is in the presbytery of Glasgow and synod of Glasgow and Ayr, and the living is worth £588 a year. The mission

church at Hogganfield is connected with the parish, and besides the churches already mentioned, there are Free churches at Millerston and Tollcross, and a U.P. church at Tollcross. Under the school board the Eastmuir, Garthamlock, Shettleston, Tollcross, and Millerston (combination) schools, with accommodation for 227, 144, 300, 300, and 301 pupils respectively, had, in 1884, attendances of 196, 44, 260, 344, and 131, and grants of £158, 7s., £34, 6s., £223, 17s., £291, 16s. 11d., and £108, 6s. In the same year the Roman Catholic schools at Cardowan and Eastmuir, with accommodation for 219 and 161 pupils respectively, had attendances of 85 and 109, and grants of £82, 14s. 6d. and £92, 12s. Pop. (1851) 6564, (1861) 6914, (1871) 7517, (1881) 9238, of whom 4502 were males and 4736 females. Houses (1881) 1819 inhabited, 284 uninhabited, and 12 being built.—*Ord. Sur.*, sh. 31, 1867.

Sheuchan. See STRANRAER.

Shevock, The, a rivulet of Aberdeenshire, dividing Insch and Culsalmond on the N from Kennethmont, Premnay, and Oyne on the S, and falling into the Ury at Old Rayne.

Shewalton House, a plain two-story mansion of 1806 in Dundonald parish, Ayrshire, near the left bank of the Irvine, 1 mile WNW of Drybridge station. The Wallaces owned the estate from at least 1473 till 1715, when it was sold to William Boyle, a brother of the first Earl of Glasgow. His descendant, David Boyle, Esq. (b. 1833; suc. 1874), holds 2344 acres in the shire, valued at £2684 per annum.—*Ord. Sur.*, sh. 22, 1865.

Shian, a hamlet in the Glenquaich section of Kenmore parish, Perthshire, near the left bank of the Quaich, 15 miles WSW of Dunkeld.

Shiant Isles, a group of islets of basaltic character and picturesque appearance in the Outer Hebrides. It lies in the Minch, 4¼ miles SE of the nearest point of the coast of Lewis, and 21 S of Stornoway. It comprises a number of rocks or skerries, and the three islets of Garv-Eilan, Ellan-na-Kelly, and Ellan-Wirrey, all three of which are noticed separately. They all present a verdant surface, the hollows and declivities abounding in rich pasture; and they form a single sheep-farm, superintended by a single family, who reside on Ellan-na-Kelly. This islet seems anciently to have been the seat of a monastery or a hermitage; and it still possesses some ruins which look to have been ecclesiastical. Its name means 'the island of the cell;' and probably its reputed sanctity gave rise to the Gaelic designation of the group as *Eileanan Seunta* or 'sacred islands.' The Shiant Isles are strikingly characterised by columnar masses similar to those of Staffa and the Giant's Causeway; and had they lain in a position more accessible to tourists or less remote from the tracks of steamboat navigation, they could scarcely have failed to acquire a fame as great as that of Staffa. Pop. (1871) 5, (1881) 6.—*Ord. Sur.*, sh. 99, 1858.

Shieldaig, a *quoad sacra* parish and a village on the W coast of Ross-shire. The *quoad sacra* parish, comprehending portions of the civil parishes of Applecross and Lochcarron, was constituted by the General Assembly in 1833, and reconstituted by the Court of Teinds since 1851. Its church is a parliamentary one, built in 1827, and containing 300 sittings. Stipend, £137. A Free church was built in 1876.—The village of Shieldaig stands on the E side of Loch Shieldaig, 6 miles NNW of Jeantown. Loch Shieldaig is a southward offshoot of the middle division of Loch Torridon; and measures 3 miles in length, by 2½ miles across the entrance. In its bosom lies Shieldaig island, 50 feet high. A stupendous cliff of shelving precipices, tier above tier, rises immediately behind the village to a height of 1691 feet, and completely screens the inner part of the neighbouring marine waters. Most of the villagers are employed in the herring fishery. Pop. of *q. s.* parish (1871) 1395, (1881) 1332, of whom 1281 were in Applecross, and 1257 were Gaelic-speaking.—*Ord. Sur.*, sh. 81, 1882.

Shieldhill, an ancient mansion in LIBBERTON parish, Lanarkshire, 4 miles NW of Biggar. Alterations were made on it in 1820, but it still comprises a massive square keep, whose second story, now the dining-room, was the family chapel in pre-Reformation days. Held by his ancestors from at least 1432, the estate now belongs to John George Chancellor, Esq. (b. 1821; suc. 1841), who owns 1500 acres in the shire, valued at £1986 per annum.—*Ord. Sur.*, sh. 24, 1864.

Shiel, Glen. See GLENSHIEL.

Shielhill, a seat of the Lyell family in Kirriemuir parish, Forfarshire, near the right bank of the South Esk, 3½ miles NE of the town.

Shiel, Loch, a lake on the boundary between the district of Moidart in Inverness-shire and the district of Ardgour in Argyllshire. Commencing at the foot of Glenfinnan, it extends 11½ miles south-westward and 6 west-by-southward, is nowhere more than 1 mile broad, and from its foot sends off the river Shiel 3 miles north-westward to salt-water Loch Moidart. The mountains which flank it have a maximum height of 2915 feet, and go off in diverging chains. They present a remarkable variety of outline and most magnificent groupings of their masses. The fishing is excellent, salmon, grilse, sea-trout, and brown trout being both fine and numerous. In Glenmoidart House is the old canoe (an oak trunk hollowed out by axe and fire) in which Prince Charles Edward was towed by his followers across Loch Shiel. They sunk it near St Finnan's Isle, and there it lay till 1855 (see FINNAN). On 15 Sept. 1873 the Queen drove from Inverlochy to 'Loch Shiel, a fresh-water loch, with fine very high rugged hills on either side. . . . As we suddenly came upon Loch Shiel from the narrow glen, lit up by bright sunshine, with the fine long loch and the rugged mountains, which are about 3000 feet high, rising all around, no habitation or building to be seen except the house of Glenaladale, which used to be an inn, and a large picturesque Catholic church, reminding one, from its elevated position to the right and above the house, of churches and convents abroad, I thought I never saw a lovelier or more romantic spot, or one which told its history so well. What a scene it must have been in 1745! And here was *I*, the descendant of the Stuarts and of the very king whom Prince Charles sought to overthrow, sitting and walking about quite privately and peaceably' (*More Leaves from the Journal of a Life in the Highlands*, 1884).

Shiels. See BELHELVIE.

Shiness Farm. See LAIRG.

Shin, Loch, a lake in Lairg parish, Sutherland. Lying 270 feet above sea-level, it extends 16⅝ miles south-eastward to Lairg village, and varies in breadth between ¼ and 1½ mile. The trout are fine, and salmo-ferox are numerous. Loch Shin possesses strictly a Highland character, but wants the magnificence of mountain-flank, the wealth of forest, and the adornment of park and islet, which distinguish many of the Highland lochs. Its south-eastern extremity, indeed, is overhung by a fine sweep of wood, and washes a slope beautifully studded with the neat cottages, the humble church, and the peaceful manse of the village of Lairg; and its W end is so sublimely encircled by the stupendous mountain-masses which are grouped with Benmore-Assynt as to need only wood and a little culture to produce a picturesque blending of grandeur and beauty; but its middle and greatly chief extent was described by Dr Macculloch as 'little better than a huge ditch without bays, without promontories, without rocks, without trees, without houses, without cultivation, as if Nature and man had equally despised and forgotten it.' Hugh Miller spent three autumn holidays at his aunt's cottage in the ancient Barony of Gruids on the shore of Loch Shin; and chapters v. and vi. of *My Schools and Schoolmasters* are largely devoted to those happy days of his boyhood.—*Ord. Sur.*, shs. 108, 102, 1880-81.

Shin, The, a short but picturesque salmon river of Sutherland, issuing from the SE end of Loch Shin, in the parish of Lairg, and running 7⅝ miles southward to the Oikell at Invershin in the parish of Creich, 3½ miles NNW of Bonar-Bridge. The vale which it traverses derives from it the name of Strathshin; and, though

narrow, is cultivated, wooded, and rich in the features of close landscape. At the river's exit from the lake, and on its E bank, are the village of Lairg, with an hotel and a pier. Two miles from the river's confluence with the Oikell is the Linn of Shin—a waterfall whose picturesqueness has been marred by blasting, but which is quite remarkable for its height as a salmon-leap.—*Ord. Sur.*, sh. 102, 1881.

Shinnel Water, a troutful rivulet of Tynron parish, Nithsdale, Dumfriesshire, rising at an altitude of 1500 feet in the north-western extremity of the parish, and flowing 10¾ miles east-south-eastward through the interior, then 2 miles north-north-eastward along the Keir boundary, till, after a total descent of 1275 feet, it falls into Scar Water, ½ mile WSW of Penpont. Just at the point of its influx to the Scar, it rushes with great impetuosity over a remarkable ridge of bold rocks; and between 2 and 3 miles above this point, or a little below Tynron manse, it makes a considerable waterfall called Aird Linn, which, owing to its being richly fringed and shaded with wood, is highly picturesque.—*Ord. Sur.*, shs. 15, 9, 1864-63.

Shira. See GLENSHIRA.

Shirmers Tower. See BALMACLELLAN.

Shiskine, a hamlet in Kilmory parish, Arran, 10½ miles WSW of Brodick. It has a post office, with money order and savings' bank departments, a Free church, and a public school.

Shochie Burn. See MONEYDIE.

Shona, an island (3 × 1⅛ miles) of Ardnamurchan parish, Moidart district, Inverness-shire. It lies in Loch Moidart, extending in length athwart about two-thirds of that loch, and dividing it into two channels. Pop. (1861) 96, (1871) 102, (1881) 118.

Shotts, originally Bertramshotts, a parish on the E border of the Middle Ward of Lanarkshire. It is bounded N by the parish of New Monkland and by Linlithgowshire, NE and E by Linlithgowshire, SE and S by the parish of Cambusnethan, for ½ mile at the SW corner by the parish of Dalziel, and W by the parishes of Bothwell and New Monkland. The boundary is largely natural. On the NW and N the line follows North Calder Water from the mouth of Shotts Burn upwards to Hillend Reservoir, passes through the centre of the reservoir, and follows the feeding stream at the E end for 3 furlongs to the county boundary. It then passes south-eastward along the county line, till, ¼ mile NE of Bauds, both reach Barbauchlaw Burn, the course of which is followed downward to a point 3 furlongs E of Barracks, whence it passes first E and then S till it reaches How Burn ¼ mile W of Balgornie. It follows this burn upwards for 1½ mile, and then strikes S by E across the Polkemmet and Fauldhouse Moors to 2⅛ miles S by E of Harthill, where, quitting the line of the county boundary, it passes W by S to the source of South Calder Water, which stream it follows all the way down to the junction of Tealing or Tillon Burn. Turning up this it follows it to a point 1 furlong N of Brownhill, whence it runs irregularly first north-westward and then north-eastward till, ¼ mile E of Fairybank, it reaches Shotts Burn, which it follows to its junction with North Calder Water. The greatest length of the parish, from the point on South Calder Water where the parishes of Shotts, Cambusnethan, and Dalziel meet, north-eastward to beyond Southrig, is 10⅞ miles; the greatest breadth, from South Calder Water at Shotts Ironworks, north-westward to North Calder Water, is 6⅞ miles; and the area is 25,336 acres, of which 392 are water. The height above sea-level varies from 341 feet at the mouth of Shotts Burn on the W, to about 1000 feet along the central ridge of high land which forms part of the watershed between the basins of the Forth and Clyde. By far the greater portion of the surface consists of undulating ridges from 700 to 900 feet high, from many points along which excellent views are to be obtained. Of the land area about 15,000 acres are arable, 3000 moss, 1300 woodland, and the rest is occupied by buildings, roads, and rough pasture. The drainage is carried off, in the SE, by the upper waters of the river Almond which has its source within the parish, by the streams already mentioned in describing the boundary line, and by smaller streams flowing to them, of which the chief is Forrestburn Water, which traverses a great part of the length of the parish on its way to join Barbauchlaw Burn. Hillend Reservoir (1½ × ⅝ mile) on the northern border, formed for supplying the Forth and Clyde Canal, has an area of almost 300 acres, of which, however, only 172 acres are in Shotts, the rest being in New Monkland. Lily Loch (4 × 2 furl.), a little to the SW, receives its name from having formerly contained a large number of water-lilies, but these were destroyed in 1836 when the canal company converted the loch into a compensation reservoir and raised the level of the water. The area is about 49 acres. Roughrig Reservoir (6 × 2 furl.), 1¼ mile SSW of this and covering an area of 120 acres, was formed in 1848 in connection with the water supply of Airdrie and Coatbridge. The soil varies very much, but, considering the elevation, produces fair returns, so that in average seasons good crops of oats, hay, potatoes, and turnips may be seen, even at an elevation of nearly 900 feet above sea-level. In the northern part of the parish the underlying rocks are intrusive dolerites, but elsewhere they belong to the Coal-measures, and are rich in bands of coal, ironstone, sandstone, and fireclay, all the beds of economic value having been long extensively and vigorously worked. Coal seems to have been mined to considerable extent from at least the middle of last century, and the development of the ironstone dates from 1787, when the Omoa Ironworks, near the extreme SW of the parish, were established by Colonel William Dalrymple, who, having distinguished himself at the capture of Omoa in the West Indies, bestowed that name on his new establishment. The works changed hands several times, and were finally abandoned in 1866. Shotts Ironworks on the SE, established in 1802 by a private company, for which John Baird was long managing partner, carry on extensive smelting operations. The company was reconstituted in 1824, and became a limited liability company in 1874. Ironstone and coal pits are scattered all over the southern portion of the parish, from Benhar on the E to Gartness on the W; and the other industries are a paper-mill at Caldercruix; tile, fireclay, and composition-brick works at Auchenlee, Greenhill, and Hareshaw in the SW, and quarries at Auchenlee and Greenside; while the Caldervale print-works, Moffat paper-mill, and Gartness Ironworks are quite close to though beyond the western border, as are also the extensive collieries about Cleland.

The church of Bertramshotts is mentioned in a Bull of Pope Sixtus IV. in 1476, and the name was afterwards applied to the whole parish, but the first part of the name dropped off during the following century. The modern name—the latter part—seems to be from the Saxon *Shot*, a plot or division of ground, but who or whence the Bertram must remain doubtful. According to Hamilton of Wishaw, he was 'a great robber that infested all that part of the country [in the time of Robert II.] by violent outrages and depredations, which he carried to a very insufferable degree; so that, at length, the Government were obliged to take notice of him, and by a public Act notified, "that whosoever should apprehend, kill him, or bring him to justice, should be rewarded with such and such lands." His name, tradition tells us, was Bartram de Shotts; he was a terror to everybody that resided near him, or who had occasion to pass east or west through those parts where he lurked and had his haunts. The Laird of Muirhead at that time was a bold, daring, intrepid man; he did not surprise him in his lurking places, but with a few of his company whose courage he could well trust, came up, and in the daytime attacked him in that valley to the east side of the Kirk of Shotts, when, after a pretty smart encounter, the Goliah, Bartram, was slain on the place. The Laird of Muirhead cut the head off this robber, which he carried straight to the king, who, immediately in terms of the proclamation, ordered him a charter and infeftment of these lands, that

were then, or soon after, called Lachop [see LAUCHOPE], and gave him as an additional honour to his arms the three acorns in the seed on the bend dexter; for the crest two hands supporting a sword, in pale, proper; and the motto *Auxilio Dei.*' There is also an allusion to the incident in the fragment called 'The Laird of Muirhead,' published in the *Minstrelsy of the Scottish Border*:—

'Afore the King in order stude
The stout Laird of Muirhead,
Wi' that sam' twa-hand muckle sword
That Bartram fell'd stark dead.'

The local tradition as now preserved differs from Hamilton as to the manner of the giant's death, which is stated to have been brought about by Muirhead alone, who, concealing himself among some heather near a well where the robber was in the habit of quenching his thirst, rushed out as Bartram lay on his face drinking, and rendered him powerless by cutting his hamstrings. There is no charter evidence as to when or how Lauchope came into possession of the Muirheads, as the older family papers seem to have been lost when Lauchope House was burned in 1570, because the owner had given shelter to Hamilton of Bothwellhaugh as he fled from Linlithgow after the assassination of the Earl of Murray. The 'stout' laird of Muirhead of the ballad was John Muirhead of Lauchope and Bullis, who was killed at Flodden. The family is now represented by the Grosset-Muirheads of BREDISHOLM. As the parish is traversed near the centre by the southern of the old main lines of road from Edinburgh to Glasgow, it was during the troublous period of Scottish history visited by several of the armies that then marched and counter-marched through the land. The great Roman road from the S divided at Belstane in Carluke, and one branch passing through Cambusnethan crossed the South Calder Water near Allanton House, and passed through Shotts by Penty, Kirkgateknowes, Hareshaw, Moor, Salsburgh, Duntillan Hill, Mountcow, and Braco, and thence to Castlecary. Stuart in his *Caledonia Romana* mentions that on Braco farm there were faint traces 'of what seems to have been an oblong enclosure, with rounded angles, about 300 feet long, by from 150 to 200 broad,' but he says the marks of it were even in his time exceedingly indistinct, and they have now altogether vanished. Traces of an old line of road are visible at several points along the route given, and near Braco and at Duntillan Hill remains of a regularly constructed way roughly causewayed with whinstone boulders have been found. In 1845 a hoard of valuable Greek coins was found on Braco farm, and in 1856 one of Roman coins. In the beginning of the present century a large number of 16th century coins were found at the base of Middle Braco Craigs.

Originally in the barony of Bothwell, Shotts was separated therefrom in 1457 and formed into a distinct lordship with the name of Bothwell Moor, which was granted to the Hamiltons, in which family the superiority still remains. In consequence of this connection the inhabitants suffered severely during the reprisals that took place after the murder of the Earl of Murray, and in Nov. 1570, 'Captain Andro Cuningham and Captain Thomas Crawford, accompanied by certain men of weir, departit of Glasgow and passed in the night to Bothwell Moor, where they reft and spulyet all the inhabitants and tenants thereof; and because the Hamiltons was gathering to rescue the said guids, they fearit to return again to said toun of Glasgow, but came to Edinburgh with the same. They brocht to the said burgh of Edinburgh 400 kye and oxen, 600 sheep, and 60 mares and staigs; this done they passed to my Lord Regent, and knew his mind, whether they should take ane composition from the poor tenants or not; but the matter was sae unmercifully handled, that the said guids were proclamit, by sound of drum and trumpet, to be sauld to whatsomever person wald buy the same. To heare the lamentable crying of the said poor tenants for the unmercifull robbery and oppression committit upon the said persons by the men of weir, it wald make ane stane-hartit man to greit and bewail. But cry what they wald cry, and lament as they pleasit, there was nane that obtainit comfort at their unmerciful hands; for when the said poor creatures made their complaint to the said Regent, he wald not hear them, till the oppression was cryit out upon by John Craig, minister. And then the regent and Lords of Secret Council ordainit that ane half of the guids be renderit again to the said poor tenants; but ere this time, the men of weir had sparfilit the best of them, and then the poor tenants were constrainit either to take again the ane half of the warst of the said guids that were left, or else they wald not have gotten naething.' In 1630 Shotts was the scene of a great 'revival,' which resulted mainly from a wonderful sermon preached by the Rev. John Livingstone, who was then living with the Earl of Wigtown at Cumbernauld, but there must have been a sad falling away afterwards, for in 1643-44 the session had to deal with a number of witches, and in 1683, according to Law in his *Memorials*, 'thirty men met betwixt the Kirk of Shotts and Cambusnethan who had beforehand forsaken the ordinances of God, and there did debate the authority of the Scriptures, and thereafter played at the football with them, and after that burned them; this was verified by two Ministers, Mr William Violent and Mr John Oliphant, who had certain information of it.' In October 1650 Cromwell was here, having marched from Glasgow with all his 'horses and fute, by the muir-way and Kirk of the Shotts, whare they had much difficulty to carey their cannoun and gunns;' and in July of 1651 his army encamped here for a night on the way from Linlithgow to Hamilton. The Shotts people were stout Covenanters, and many of them were concerned in the Pentland Rising as well as in the later affairs of Drumclog and Bothwell Bridge. The Duke of Monmouth's army on its way to the last battle encamped for ten days near Muirhead in the E end of the parish, and on their return march passed the same way, on both occasions making pretty free with the property of the inhabitants as the Highland Host had done before them. The moss in the extreme SE of the parish between Benhar and Starryshaw was the chief scene of the district conventicles, and it was here that Cargill preached the Sunday after Richard Cameron's death from the text, 'Know ye not that there is a prince and a great man fallen this day in Israel.' A large boulder to the S of Benhar farm-house is known as Peden's Stone, and to it is now attached an iron slab with the inscription 'This stone, according to tradition, is one of the places where Peden and others preached to the Covenanters, of whom the world was not worthy. They wandered in deserts and mountains and in dens and caves of the earth.—Erected by a Committee from proceeds of sermons, 1866.' In the churchyard is an upright stone with the inscription, 'Here lyes the bones of William Smith, who lived in Moremellen, who, with others, appeared in arms at Pentland Hills in defence of Scotland's Covenanted work of Reformation, anno 1666, agreeable to the Word of God in opposition to Popery, Prelacy, and Perjury, and was murdered near this place.' His death seems to have taken place, however, in a private quarrel just after his return from Pentland. Two of the Covenanters' flags were long preserved in a family in the E end of the parish, and though one has now disappeared the other still remains. The latter is made of linen 5 feet by 6, and bears the crown and Scottish thistle, an open Bible with the words *Verbum Dei* across it, and the inscription in red letters: 'For the parish of Shotts, for Reformation in Church and State according to the Word of God and our Covenants.' In subsequent historical events the parish had but little share, though in 1745 part of the Highland army passed through it during their retreat from England, and levied contributions from many of the inhabitants.

A church dedicated to the Virgin Mary and St Catherine of Sienna* existed at a 'desert place' called Bertramshotts in the middle of Bothwell Moor

* A well near the church is still called Kate's Well, and in the neighbourhood are Kate's Park and Kate's Brae.

prior to 1450. It was a dependency of the Collegiate church of Bothwell, and the site was about the E end of the present churchyard. It was repaired and partly rebuilt in 1640-48, and again in 1691, but having become unsafe it was removed and the present church erected in 1819-21 at a cost of nearly £3000. The spire was struck by lightning and destroyed in 1876, but a new one was at once erected and other repairs executed. After the Reformation, Bothwell, Shotts, and Monkland were all attended to by the minister of Bothwell, and afterwards this grouping was altered to Shotts, Bothwell, Cambusnethan, and Dalziel, while from 1571 to 1591 the parish had a 'reader.' In 1588 the Synod of Glasgow ordered a minister to be appointed, and this was done in 1591. Distinguished natives have been John Miller (1735-1801), miscellaneous writer and professor of civil law in Glasgow University, whose father was minister of the parish; Dr Matthew Baillie (1761-1823), the famous London physician, whose father was minister of the parish, his mother being a sister of the celebrated anatomist, Dr William Hunter; Dr Baillie's sister, the well-known Joanna Baillie, was born at Bothwell only 9 days after her father's translation from Shotts to that parish; Janet Hamilton (1795-1873), the poetess; while Gavin Hamilton, the historical painter (1717 to 1776 or 1796), seems to have sprung from a Shotts family, but he was probably born in Edinburgh. Dr Cullen, the eminent Edinburgh physician, had his first practice at Shotts. The parish is traversed by one of the main roads from Edinburgh to Glasgow, which passes for 7 miles through the centre; another by Bathgate, Airdrie, and Coatbridge passes for 3⅞ miles just inside the northern border, and there are, except in the moorland, good district roads. The northern border of the parish is traversed by the Coatbridge and Bathgate section of the North British railway system, with stations at Westcraigs and Forrestfield, while others farther W at Caldercruix and Clarkston are close to the parish boundary. The first is 23½ miles W by S of Edinburgh, and the second 26½, and from Westcraigs a branch passes through the eastern part of the parish, quitting it at Shotts Ironworks on its way to join the Bathgate and Morningside section at Blackhall. The Edinburgh and Glasgow section of the Caledonian railway passes along the S side, and has stations at Shotts Ironworks, 25½ miles from Edinburgh and 16½ from Glasgow; Omoa, 30 from Edinburgh and 12 from Glasgow; and Cleland, 30 from Edinburgh and 12 from Glasgow, the last being on a branch line from Newarthill to Morningside. There are also several mineral loops and branches. The lands of Hartwood and Bowhouse Bog, about 2 miles E of Omoa station, with two small adjoining properties, extending in all to about 600 acres, were, in 1883, acquired by the Lanarkshire Lunacy Board at a price of £26,500 as a site for a new district asylum, which is to be built with accommodation for about 1000 patients, at a total coast of over £150,000.

The village, including Kirk of Shotts and Shottsburn, is about 2¾ miles NNW of Shotts station. It has a post office, with money order, savings' bank, and telegraph departments, and a branch office of the Commercial Bank. The Duke of Hamilton obtained in 1685 'full power, liberty, and privilege to hold two free fairs yearly at the Church of Shotts. The one upon the . . . day of June, the second upon the . . . day of August, with a weekly mercat at the said Church of Shotts;' and annual fairs are still held on the third Tuesday of June and the last Tuesday of November—both *o. s.*—the latter having probably superseded the August fair, which was given up early in the present century. It was a yarn fair where home-spun cloth and yarn were disposed of. The balance on which the material was weighed hung at the Tron Knowe to the E of the present school. The parish also includes the villages of Dikehead (SE), Greenhill (SW), Harthill (E), Muirhead (SE), and Salsburgh (W), and the greater part of the villages of Cleland and Shotts Ironworks, all of which are separately noticed.

Shotts is in the presbytery of Hamilton and synod of Glasgow and Ayr, and the living is worth £593. The church, which has been already noticed, contains 1200 sittings. The parish contains also the *quoad sacra* churches of Calderhead, Harthill and Benhar, and Cleland, and embraces part of the *quoad sacra* parish of Clarkston. The Free church, built in 1848 and rebuilt in 1878, is at Dikehead; and there are also Free churches at Harthill and Cleland. The United Original Secession church at Shottsburn originated in an Associate Congregation formed in 1738 in consequence of the forced settlement of Rev. David Orr in that year, and afterwards greatly strengthened by the forced settlement of Rev. Laurence Wells in 1768. The church was erected in 1771, but has since been repaired. There is a Roman Catholic church at Cleland. Under the school board Cleland, Greenhill, Greens, Harthill, and Shotts public schools, with accommodation for 300, 250, 63, 230, and 207 pupils respectively, had in 1884 attendances of 211, 116, 26, 268, and 129, and grants of £180, 12s., £105, 12s., £33, 12s., £208, 7s., and £115, 7s. Not under the school board Benhar Colliery and Cleland Roman Catholic schools, with accommodation for 373 and 254, had at the same date attendances of 290 and 116, and grants of £264, 13s. and £109, 11s. The mansions are Murdoston and Easter Moffat. Nineteen proprietors hold each an annual value of £500 or upwards, 25 hold each between £500 and £100, 22 between £100 and £50, and there are a number of smaller amount. Valuation (1860) £27,266, (1885) £76,494, 18s. Pop. (1801) 2127, (1831) 3220, (1861) 7343, (1871) 8353, (1881) 11,214, of whom 6045 were males and 5169 females, while 4294 were in the ecclesiastical parish. Houses (1881) 2014 inhabited, 277 uninhabited, and 12 being built. See also Grossart's *Historic Notices of the Parish of Shotts* (Glasgow, 1880).—*Ord. Sur.*, shs. 31, 23, 1867-65.

Shotts Ironworks, a village on the border of Shotts and Cambusnethan parishes, Lanarkshire, near Shotts railway station, and 9¼ miles E of Holytown. It has pig-iron works with six furnaces. Pop. (1861) 1335, (1871) 1208, (1881) 969, of whom 543 were males and 426 females, while 740 were in the Shotts portion of the village.

Shuna, a Hebridean island in Kilbrandon and Kilchattan parish, Argyllshire, lying 1 mile SW of the entrance of Loch Melfort, and separated from the mainland on the E by a sound 1 to 2 miles broad, from the island of Luing on the W by the Sound of Shuna, ½ to ⅝ mile broad. Its length, from N to S, is 2½ miles; its greatest breadth is 1¼ mile; and its area is 1173½ acres, of which 57½ are foreshore. The surface is all rolling, tumulated, and broken ground, whose tiny summits nowhere rise higher than 200 feet above sea-level. It possesses much of that intricate mixture of land and rock which, with the aid of wood and culture, abounds in mild soft pictures of rural beauty; it derives picturesqueness from its encincturement with intricate bands of sea, overhung by the lofty hard-featured heights of island and mainland; and it has everywhere such a profuse and curious interspersion of natural woods, with rocks and cultivated fields and pasture lands, as to look, from end to end, like a large sea-girt park. Though topographically grouped with the Slate Islands, it possesses little or none of the clay-slate so prevalent in Luing and Seil, Easdale, Lunga, and Scarba; yet it presents interesting objects of study to a geologist, and at each end it has a bed of dark blue crystalline limestone, which has long been wrought for economical purposes. Shuna belongs to the City of Glasgow. Pop. (1861) 43, (1871) 15, (1881) 14.

Shuna, an island of Lismore and Appin parish, Argyllshire, in Loch Linnhe, nearly opposite Portnacroish village, and 14 miles NNE of Oban. Measuring 10½ by 5¼ furlongs, it rises to a height of 233 feet, and contains the ruins of Castle-Shuna. Pop. (1871) 14, (1881) 8.—*Ord. Sur.*, sh. 53, 1877.

Shurrery, Loch. See Reay.

Shurroch Hill. See Kingoldrum.

Sibbaldbie. See Applegarth.

Sidlaw Hills, a long chain of heights, extending from Kinnoull Hill, on the left bank of the Tay, in Perthshire, east-north-eastward and north-eastward to the German Ocean at Redhead in Forfarshire, and at Stonehaven in Kincardineshire. The chain is detached from the Ochil range only by the intervention of the Tay and the Earn; just as the latter range is detached from the Lennox Hills only by the intervention of the vale of the Forth; and jointly with these ranges it forms the Lowland screen, or the screen on the Lowland side, of what, without any great accommodation of language, may be called a continuous valley along the skirt of the Highland frontier, from the vale of the Leven in Dumbartonshire to the German Ocean at Stonehaven. To the more marked and emphatic, and to the popularly designated part of this great valley, or 'Strathmore,' belongs the screen of the Sidlaws. Yet the heights are not strictly a chain. They extend with considerable ridgy regularity from Kinnoull Hill, north-eastward to a point a little distance SE of the town of Forfar; they there fork into two lines, the one of which goes off in undulations and detachments, yet with very observable continuity nearly eastward to the sea at Redhead, while the other proceeds irregularly north-eastward, becomes almost lost in the vicinity of Brechin, and afterwards rallies and straggles on along the Lowland side of the Howe of Kincardine to the sea at Stonehaven. In the popular application of the name, however, the Sidlaws are only the part in Forfarshire from Lundie to Redhead. Many of the hills, such as the celebrated Dunsinane, are isolated in position, and have conical summits. Some, such as the hills of Lower, Dunnichen, Dumbarrow, and others, are rounded and detached, and overhang intervening valleys. In some instances, as in the ridge of the Tulloes, which runs along the southern frontier of the parishes of Inverarity, Dunnichen, and Kirkden, the heights form a long flat regular range of moderate elevation. The highest point is Auchterhouse Hill (1399 feet); but this, or an altitude very little inferior, is attained by many other of the summits. Seen from Fifeshire, they appear a lofty brown mountain-barrier, drawn out like a huge rampart to cover the interior of Perthshire and Forfarshire. Some of them are cultivated to the summit, and many which, a century ago, were covered all over with stunted heath, now seem to groan beneath loads of green umbrageous timber. The prevailing formation of the Sidlaws is the Old Red Sandstone,—part of the vast bed which so curiously waves in several great and successive curvatures across Forfarshire. On the side facing Strathmore, the strata dip to the N at an angle of about 45°; but they diminish in dip as the hills are crossed, till on the side facing the Lowlands, especially in the upper part of Carmyllie, they become nearly or altogether horizontal. The sandstone is of various colours, red, brown, grey, white, with a slight tinge of green; and it is, in some instances, susceptible of a remarkably smooth polish. The strata alternate with beds of shale, and occasionally with some beds of conglomerate which measure from 50 to 100 feet in thickness. Trap rocks, chiefly of greenstone, and to some extent of porphyry, occur plentifully in intersecting veins, and occasionally in surmounting nodules and masses. An impervious boulder-formation covers a large part of the surface.—*Ord. Sur.*, shs. 48, 57, 66, 67, 1868-71.

Sillyearn Hill. See GRANGE, Banffshire.

Silverbanks. See CAMBUSLANG.

Simprin. See SWINTON.

Sinclairston. See OCHILTREE.

Sinclairtown. See DYSART and KIRKCALDY.

Skar Water. See SCAR WATER.

Skateraw. See INNERWICK.

Skateraw, a fishing-village in Fetteresso parish, Kincardineshire, close to Newtonhill station, and 6 miles NNE of Stonehaven. Pop. (1871) 336, (1881) 375.

Skavaig, Loch. See SCAVAIG, LOCH.

Skelbo Castle, the ancient seat of the Sutherlands, Lords Duffus, in Dornoch parish, Sutherland, on the southern shore of Loch Fleet, 5 miles N by W of the town.

Skelmorlie, a watering-place in Largs parish, Ayrshire, and a *quoad sacra* parish partly also in Innerkip parish, Renfrewshire. The village stands upon the Firth of Clyde to the S of the terminus of the Greenock and WEMYSS BAY railway (1865), this being 8 miles SW of Upper Greenock and 30½ W of Glasgow. Feued out since 1850, and mainly built of native red sandstone, it comprises two portions, Upper and Lower Skelmorlie, the former of which contains some workmen's houses, whilst the latter consists of three rows of villas and a beautiful crescent behind. A hydropathic establishment, in the Scottish Baronial style, was erected in 1868, and in 1875 received the addition of new Turkish, salt-water, and other baths. It is perched on the edge of a rugged cliff of conglomerate sandstone and pebble, which rises to a sheer height of 100 feet above the shore-road; and it thus enjoys the most bracing air and commands a magnificent view. The *quoad sacra* parish, formed in 1860, is in the presbytery of Greenock and the synod of Glasgow and Ayr; the living is worth £500. Its church was built in 1856, and enlarged in 1858. There are also a U.P. church (1874), a post office under Greenock, with money order, savings' bank, and telegraph departments, and a public school, with accommodation for 135 children. Pop. of village (1871) 404, (1881) 757, of whom 238 were in Lower Skelmorlie; of *q. s.* parish (1871) 886, (1881) 1264, of whom 311 were in Renfrewshire.

Skelmorlie Castle, 1¾ mile S of Wemyss Bay station and 4¼ miles N by W of Largs, stands 1 furlong inland, on the N side of lovely Skelmorlie Glen. Its oldest part dates from 1502; and Pont described it in 1608 as 'a fair veill-built housse, and pleasantly seatted, decorred with orchards and woodes, the inheritance of Robert Montgomery, Laird thereof,' whose ancestor, George, was second son of the first Lord Montgomerie, and from him received in 1461 the lands of Skelmorlie, formerly held by the Cunninghams of Kilmaurs. The estate reverted by succession to the Eglinton family; and in 1852, with consent of the late Earl, the old ruined mansion was restored by the present occupier, John Graham, Esq., a wealthy Glasgow merchant, who has made it a picturesque and delightful residence. He is a great art collector, and possesses paintings by Turner, Landseer, Holman Hunt, Wilkie, Ary Scheffer, Gainsborough, Gerôme, Stanfield, Rosa Bonheur, etc. Under LARGS are noticed the Skelmorlie Aisle and the 'serpent mound.'—*Ord. Sur.*, sh. 29, 1873. See EGLINTON CASTLE; Gardner's *Wemyss Bay and Skelmorlie* (Paisley, 1879); and A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Skene, a parish of SE Aberdeenshire, whose church stands, 405 feet above sea-level, 6 miles S by E of Kintore and 8⅞ W by N of Aberdeen, under which there is a post office, and with which Skene communicates daily by the Cluny and Echt coaches. It is bounded N by Kintore and Kinellar, E by Newhills, SE and S by Peterculter, SW by Echt, W by Cluny, and NW by Kemnay. Its utmost length, from NW to SE, is 7 miles; its breadth varies between 1⅝ and 4⅝ miles; and its area is 10,500 acres, of which 270 are water. Oval Loch Skene (7 × 5 furl.) lies at an altitude of 276 feet on the SW border, and covers an area of 311¾ acres, 45 of which are in Echt. It contains pike; has a maximum depth of only 12 feet; receives Kinnernie or Corskie Burn, flowing 1¾ mile east-south-eastward along the Echt boundary; and sends off LEUCHAR BURN, creeping 3⅝ miles southward and east-south-eastward along the Echt and Peterculter boundary, on its way to the river Dee. The surface sinks along Leuchar Burn to 234 feet above sea-level, and rises thence to 632 feet at the Hill of Kinmundy, 744 at the Hill of Keir, and 731 at the Hill of Auchronie. Formerly Skene had a bleak and barren appearance; but it has, within recent times, been greatly improved in the way of both reclamation and planting. Its highest grounds are now all either cultivated to the top or largely clothed with plantation. But a small part of it, however, has a fertile soil; the greater part being either light or cold, and generally

incumbent on clay. The predominant rock is granite. Fully two-thirds of the entire area are in tillage; one-eighth is under wood; and the rest is either pasture, moss, or waste. Antiquities are the 'Drum Stone' on the KINELLAR border, remains of tumuli and stone circles, traces of a watch-tower on the Hill of Keir, and supposed memorials of a Roman road from the Dee to the Don. Skene House, 3 miles WNW of the church, is a fine baronial edifice, part old, part modern. In 1880 it was purchased from the Earl of Fife by George Hamilton, Esq. Other mansions, noticed separately, are EASTERSKENE and KIRKVILLE; and 8 proprietors hold each an annual value of £500 and upwards, 7 of between £100 and £500. Skene is in the presbytery and synod of Aberdeen; the living is worth £221. The parish church, originally dedicated to St Bride, was rebuilt in 1801, and contains 700 sittings. The Free church stands ¾ mile to the W, near the NE shore of Loch Skene. Four schools—the Central, Garlogie, Westhill, and Lyne Free Church—with respective accommodation for 126, 68, 100, and 100 children, had (1884) an average attendance of 116, 68, 59, and 46, and grants of £101, 3s., £59, 10s., £50, 19s., and £41, 4s. Valuation (1860) £8585, (1885) £10,908, 16s. 6d. Pop. (1801) 1140, (1831) 1677, (1851) 1862, (1871) 1842, (1881) 1787.—*Ord. Sur.*, shs. 76, 77, 1874-73.

Skene, Loch, a dark and lonely lake in the NE of Moffat parish, N Dumfriesshire, ¾ mile W of the meeting-point of the counties of Dumfries, Selkirk, and Peebles, 1⅛ mile W of the source of the Yarrow, and 11¼ miles NNE of the town of Moffat. Lying 1680 feet above sea-level, it has an utmost length and breadth of 6 and 1⅜ furlongs, and is of unknown depth. Its basin is mossy, bleak, and wild, White Coomb (2695 feet) rising to the S, and Lochcraig Head (2625) to the N. Loch Skene affords good sport to the fisherman, its trout running 2 or 3 to the lb., and 12 to 18 lbs. being a fair day's catch. The stream by which the lake discharges its superfluent waters to the river Moffat forms the magnificent cascade called the GREY MARE'S TAIL. According to a paper read by Mr Ralph Richardson to the Edinburgh Geological Society on 3 Feb. 1881, a glacier once moved down towards Moffatdale, following the existing drainage line, viz., the courses of Midlaw and Tail Burns. The northern lateral moraine of this glacier—now represented only by mounds—acted as a barrier to the water flowing from the N, and thus Loch Skene was formed.—*Ord. Sur.*, sh. 16, 1864.

Skerries, Out. See HOUSIE SKERRIES.

Skerries, Pentland. See PENTLAND FIRTH.

Skerrow, Loch, a triangular lake near the Balmaghie boundary of Girthon parish, Kirkcudbrightshire, close to the railway, 13 miles WNW of Castle-Douglas. Lying 425 feet above sea-level, it measures 5½ by 4 furlongs, is prettily studded with five or six copse-clad islets, and contains pike and very fine trout, running up sometimes to 6 lbs.—*Ord. Sur.*, sh. 5, 1857.

Skerryvore Lighthouse, a lighthouse on a rock forming one of an extensive reef, 10 miles SW of the Isle of Tyree. Lying in the fairway of vessels making for the Clyde and Mersey, and exposed to the mighty 'fetch' of the Atlantic, this reef was long the terror of mariners. The rock on which the tower is built is composed of gneiss worn so smooth by the continued action of the sea that the foreman mason compared landing on it to climbing up the neck of a bottle. In order that the light might show far beyond the foul ground, the tower was so designed as to have a range of 18½ nautical miles. The tower is 137 feet 11 inches high (158 feet to top of the lantern), 42 feet in diameter at base, decreasing to 16 feet at the top, and contains a mass of granite masonry of 58,580 cubic feet. For 26 feet in height the tower is solid, and the contents weigh nearly 2000 tons. The walls, as they spring from the solid, are 9½ feet thick, gradually diminishing to 2 feet at the top. Above the solid the interior is 12 feet in diameter, divided into nine stories, surmounted by a lightroom and lantern. Operations were commenced on the rock in 1838, and the light was exhibited in February 1844, six years being thus occupied in the work. The apparatus is dioptric revolving, the light attaining its greatest brilliance once a minute; the machinery which drives the apparatus is also employed to toll fog-bells. The tower is the tallest and most graceful rock lighthouse in Britain, if not in the world. The cost of the work, including the steam-vessel, the small harbour for the attending vessel, and the dwellings for the keepers and seamen, was £86,977. The lighthouse, which was designed and erected by the late Mr Alan Stevenson, is a noble monument of his engineering skill. See his *Account of the Skerryvore Lighthouse* (Edinb. 1848).

Skiach, Loch. See DUNKELD, LITTLE.

Skiack, The, a troutful rivulet of Ross-shire, formed by several head-streams that rise among the south-eastern and southern skirts of Ben Wyvis, and winding 10¼ miles east-north-eastward through Fodderty, Dingwall, and Kiltearn parishes till it falls into the Cromarty Firth, close to Kiltearn church. During a drought in summer, it almost disappears; but, after heavy rains or the thawing of winter snows, it is a voluminous and headlong torrent, which, but for embankments, would desolate the arable grounds on its banks.—*Ord. Sur.*, sh. 93, 1881.

Skibo Castle, a modern mansion in DORNOCH parish, Sutherland, 4 miles W by S of the town. Purchased in 1872 for £130,000, and greatly improved since then, the estate belongs to Evan Charles Sutherland, Esq. (b. 1835), who holds 20,000 acres in the shire, valued at £4194 per annum.—*Ord. Sur.*, sh. 94, 1878.

Skinnet. See HALKIRK.

Skinsdale, a stream of Clyne parish, Sutherland, rising at an altitude of 1900 feet on the E side of BEN-AN-ARMUINN, and running 13 miles eastward, south-eastward, and southward, till, after a total descent of nearly 1800 feet, it falls into the Black Water, 2 miles WNW of the head of Loch Brora.—*Ord. Sur.*, shs. 108, 109, 103, 1878-80.

Skipness (Norse 'ship point'), a village and a *quoad sacra* parish on the E side of Kintyre peninsula, Argyllshire. The village, lying on a small bay of its own name, at the northern entrance to Kilbrannan Sound, is 4½ miles by water NNW of Loch Ranza in Arran, and 12 by road S by E of Tarbert. It has a post and telegraph office; and 1¾ mile to the NE is a quay, erected at a cost of £3000. The old castle of Skipness stands 5½ furlongs E by N of the village and 3 WNW of low Skipness Point, which divides Kilbrannan Sound from the entrance to Loch Fyne. An imposing structure, of high antiquity, but in good preservation, it forms a square, with an inner court. The outer wall is 7 feet thick, 33 high, and 450 in circumference. The western side is flanked by a small central tower; whilst of two projecting towers, one at the SE and one at the NE corner, the former was known as Tur an t'sagairt ('the priest's tower'), and the latter was evidently the keep of the castle. A portcullis defended the entrance. Modern Skipness Castle is the seat of Robert Chellas Graham, Esq. (b. 1848), who is Lord of the Barony of Skipness, having purchased this property in 1867, and who holds 15,000 acres in the shire, valued at £1876 per annum. The *quoad sacra* parish, forming the northern portion of the civil parish of SADDELL and Skipness, and constituted in 1871, is in the presbytery of Kintyre and the synod of Argyll; its minister's stipend is £120. The church, on the left bank of Claonaig Water, 2¼ miles WSW of Skipness village, was built in 1756 at a cost of £300, and contains 288 sittings. Pop. (1871) 500, (1881) 470, of whom 362 were Gaelic-speaking.—*Ord. Sur.*, sh. 21, 1870.

Skiport, Loch, an intricately ramified chain of marine sounds and straits across the island of South Uist, at the mean distance of about 5 miles from its N end. It is usually described as simply projecting into the island; but really bisects it from sea to sea, so as to render it two islands though one only in name. To add to the confusion, the loch or strait assumes, at the W end, the name of Loch Gamoslechan or Bee. All the land immediately connected with it is a maze of low rocky

islands and promontories; forming the commencement of that chequered and diversified mixture of flat lands and waters which separates South Uist from Benbecula.

Skirling, a village and a parish of W Peeblesshire. The village stands 690 feet above sea-level, 2½ miles ENE of the town and station of Biggar, under which it has a post office.

The parish is bounded NE by Kirkurd, E and S by Broughton and Kilbucho, and W and NW by Biggar in Lanarkshire. Its utmost length, from N to S, is 3 miles; its utmost breadth, from E to W, is 2 miles; and its area is 3427¾ acres, of which 5 are water. Biggar Water flows 1½ mile eastward along all the southern boundary; and Spittal Burn, its affluent, traces most of the Lanarkshire border. Beside Biggar Water the surface declines to 640 feet above sea-level; and thence it rises northward to 920 feet near South Mains, 1035 at Skirling Craigs, 1163 near Townhead, and 1399 at Broomy Law near the northern extremity of the parish. The rocks are chiefly Silurian, and the soil is mostly light but fertile. Nearly four-fifths of the entire area are in tillage; about 35 acres are under wood; and the rest is partly moor but chiefly green pasture. Skirling Castle, an old baronial fortalice which stood in the south-western vicinity of the village, belonged in the 16th century to Sir James Cockburn, a warm partisan of Queen Mary; and, demolished in 1568 by order of the Regent Moray, has entirely disappeared. A monastic establishment is believed to have stood on Kirklawhill farm; and coins of Adrian and Antoninus were found about 1814 near Greatlaws. James Howe (1780-1836), the animal painter, was the son of a former minister. The barony of Skirling, possessed by the Cockburns from about 1370 till 1621, since the close of the 17th century has belonged to the Carmichaels; and the Rev. Sir W. Gibson-Carmichael, Bart., of Castle-Craig, is almost the sole proprietor. Skirling is in the presbytery of Biggar and the synod of Lothian and Tweeddale; the living is worth £336. The parish church, at the village, is a building of high antiquity, renovated in 1720, and containing upwards of 200 sittings. There is also a Free church; and a public school, with accommodation for 87 children, had (1884) an average attendance of 42, and a grant of £44, 18s. Valuation (1860) £2274, (1885) £3598, 18s. Pop. (1801) 308, (1831) 358, (1861) 317, (1871) 325, (1881) 274.—*Ord. Sur.*, sh. 24, 1864.

Skye, an island in the W of the county of Inverness, of the whole area of which it forms a little more than one-seventh. It is the largest island of the Inner Hebrides, and the second largest of the whole group, as well as of all the islands lying off the coast of Scotland. It extends from N latitude 57° 42′ 30″ at Rudha Hunish in the extreme N—though the outlying islets of Trodday and Fladdachuain are respectively 2½ and 4 miles NE and NW of that point—to N latitude 57° 1′ 12″ at Point of Sleat on the extreme S, and from W longitude 5° 38′ 50″ at Rudha na Caillich at the S end of Kyle Rhea to W longitude 6° 47′ 8″ at Eist on the extreme W of Duirinish. The shape of the island may be compared to that of the tail part of the body of a huge whale, the tail lying to the SE next the mainland, and the body stretching away to the NW; but it is a whale that has suffered from the onslaughts of the ocean, for the outline of the sides, instead of being smooth and regular as it would be in the animal, is everywhere cut into by sea lochs which deeply indent the island on every side. To the N and NE the island is bounded by the Minch, the distance across which, from Point of Aird near Rudha Hunish to the coast of Ross-shire at the mouth of Gairloch, is 19 miles; from the E side of Staffin Bay to Red Point at the N side of Loch Torridon it is 14 miles; and from the point at the S side of the entrance to Loch Torridon westward through the extremity of South Rona the distance is 12 miles. To the S of this the boundary is the Sound of Raasay, the narrows of Raasay, and Loch na Cairidh, ½ mile wide, between Skye and Scalpay. At the SE end the last widens out into the open sea-space where the Inner Sound and Loch Carron meet, the distance across from Broadford Bay to the SW corner of Applecross being 8 miles. From this point the coast curves east-north-eastward to form the right hand lobe of the tail, the point to the eastward being divided from the Lochalsh district of the mainland of Inverness-shire first by the narrow Kyle Akin (3 furlongs) and then by Loch Alsh (1 mile). From Loch Alsh along the bottom of the tail—that is, the SE side of Skye—the boundary is for 2 miles Kyle Rhea (barely ½ mile), and for the remaining 19 miles the Sound of Sleat, averaging fully 1 mile in width, to the N side of Loch Hourn, 3 to 4 miles from Loch Hourn to Loch Nevis, and from 4½ to 7 beyond Loch Nevis as it widens out into the sea of the Hebrides. To the W of the Point of Sleat, between Skye on the one hand and Rum and Canna on the other, is Cuillin Sound, which opens out at both ends into the sea of the Hebrides. Its width is noticed under Rum. On the W and NW of the island is the Little Minch, the distance across which from Eist Point on the extreme W of Duirinish westward to Benbecula is 16 miles; from Vaternish Point at the extreme NW of Skye westward to Loch Maddy in North Uist it is 18 miles; and from Rudha Hunish north-westward to the mouth of East Loch Tarbert in Harris it is 16 miles. Along the narrow kyles and sounds on the E and SE the tides rush with great speed and force, so much so indeed that sailing vessels cannot pass northwards through Kyle Rhea and Kyle Akin against an adverse tide. These straits are also of considerable depth. One basin, occupying Raasay Sound, the Inner Sound, and part of the Minch, has been already noticed under Raasay; there is another at the point where the Inner Sound and Loch Carron meet which reaches a depth of 68 fathoms below the surrounding sea bottom, which has a depth of about 50 fathoms; and a long narrow one begins at the mouth of Loch Hourn, and extends down and beyond the Sound of Sleat, till it dies out about 3 miles NE of Eigg. Its depth at the entrance to Loch Hourn is 50 fathoms below the surrounding sea-bottom, which has a depth of about 60 fathoms, but the depression gradually diminishes to about 20 fathoms as the hollow extends south-westward. In Cuillin Sound to the N of Rum there is another basin which reaches a depth of 74 fathoms beneath the surface of the surrounding sea-bottom, which has a depth of about 65 fathoms. Still another—and that a large one—extends from the N end of South Uist northwards through the Little Minch as far as Loch Seaforth in Lewis, but keeps mostly to the side next the Outer Hebrides, except along the W coast of Skye, where it occupies the greater part of the width of the strait, the depth of the portion opposite Dunvegan Loch being 36 fathoms below the surface of the neighbouring sea-bottom, which is about 60 fathoms deep. There are also smaller hollows at the mouths of Loch Sligachan and Loch Ainort, in Loch Alsh and the narrow part of the Sound of Sleat, and in Lochs Slapin, Scavaig, Brittle, Eynort, and Bracadale; in Loch Bay off Dunvegan, and near the mouth of Loch Diubaig on the S side of Loch Snizort. In several of these depressions groups of shells of Arctic habitat still linger, seeming to be survivals of those that lived in the British seas during the glacial epoch.

Coast, etc.—The coast-line is very irregular and broken. Beginning at the N end at Point of Aird 2½ miles E of Rudha Hunish, the first opening is Kilmaluag Bay (4 × 4 furl.), and 4 miles SSE is Staffin Bay, 1½ mile across the mouth and ¾ mile deep. From Staffin Bay southward the line is very little broken for almost 15 miles till Portree Bay is reached. The next large opening, opposite Kyle More, between Raasay and Scalpay, is Loch Sligachan, averaging ⅛ mile wide and 3 miles deep from entrance to head; and 3 miles SE of this at the N end of Loch na Cairidh is Loch Ainort, ½ mile wide and 1¼ mile from entrance to head. At the S end of the open sea-space where Loch Carron opens out to the Inner Sound is Broadford Bay, 1½ mile wide and ¾

mile from entrance to head; and to the E of it is Breakish Loch, 1 mile long by about 100 yards wide; while immediately to the E of Kyle Akin is Loch na Beiste, 5 furlongs wide at the entrance and 1 mile from that to the head of the loch. In the SE side the only opening of any size is Loch na Dal (1 mile wide at entrance and 1¼ deep) near the centre, corresponding to the gap between the lobes of the tail. Close to the mouth of this loch is the small but well sheltered harbour of Isle Ornsay. The peninsula to the SW of this is Sleat, and to the W of the northern part of it is a nameless inlet, which branches off on the E into Loch Eishort, and on the N into Loch Slapin. The former is 1¼ mile wide across the mouth from Rudha Suisnish between the two lochs and Dunscaith Castle, and is 6 miles from entrance to head; but along the upper 3½ miles it narrows considerably, the average width being from 2½ to 3 furlongs, but in some places less. Loch Slapin, 2 miles wide at the entrance and 3¾ miles deep, also narrows considerably in the upper reaches. The nameless inlet lying outside these lochs may be taken as 3 miles wide and 4 in depth from the entrance, between Tarskavaig Point in Sleat and Strathaird Point, to Rudha Suisnish. The promontory to the W of this and Loch Slapin is Strathaird, immediately to the W of which is Loch Scavaig, 2¾ miles wide at the entrance and 4½ deep from this to the head of the loch. The outer part of the western side is formed by the island of Soay, which is separated from the mainland of Skye on the N and NW by Soay Sound, from 5 furlongs to 1 mile wide. The point at the extreme W corner of this is Rudh 'an Dunain, immediately to the NW of which is Loch Brittle, 1¾ mile wide and 1½ from entrance to head, and 3 miles NW of it is Loch Eynort, averaging 3 furlongs wide and 3¼ miles from entrance to head. Six miles farther to the NW is the large Loch Bracadale, 4 miles wide across the mouth from Rudha nan Clach (SE) to Idrigill Point (NW), and with an area of over 16 square miles. From the E side the long curved Loch Harport branches off with an average width of ½ mile and over 6 miles long. At the top of Loch Bracadale are the smaller Loch Caroy (N), Loch Valten (N), and Loch Varkasaig (NW). The district between a line drawn from Loch Scavaig to the top of Loch Sligachan on the E and Lochs Bracadale and Harport on the NW is called Minginish. Beyond Loch Bracadale along the SW coast the only other inlet of any size is the shallow Moonen Bay close to Eist at the extreme western point of the island, but along the NW there are in all 4 openings that need be mentioned, and of these 2 are of very large size. The first of these onward from Eist is Loch Pooltiel, a triangular opening about 2 miles deep, and then in order are Loch Dunvegan, Loch Snizort, and Score Bay, the northern part of the latter being known as Duntulm Bay, beyond which is the small Loch Hunish, with Rudha Hunish, the most northerly point of the island on its N side. Loch Dunvegan is fully 3 miles wide across the entrance from Dunvegan Point (SW) to Ardmore Point (NE), and is wider inside. Two and a half miles from the entrance it branches off into two forks, of which the one to the S retaining the name of Dunvegan extends south-eastwards for 6 miles, while the other runs eastward for 2½ miles, and bears the name of Loch Bay. To the NE of Ardmore Point is the small Ardmore Bay. The peninsula almost cut off from the rest by the island between Dunvegan Bay—in all its length—and the north-western division of Loch Bracadale, is Duirinish. Two and a half miles NE of Dunvegan is Loch Snizort, the largest inlet in the whole island, which may, in its widest extent, be taken as 8 miles wide across the mouth along a line from Vaternish Point east-north-eastward, and from this it extends south-eastward for over 8 miles. Near the centre of the SW side is the semicircular Aros Bay, and on the extreme S the small Loch Diubaig, while from the SE pass off Loch Greshornish (S), averaging 3 furlongs wide and 3 miles long; and Loch Snizort Beag (SE) from 2 to 4 furlongs wide and fully 6 miles long, but very shallow in its upper reaches. Near the centre of the E side of the main loch is Uig Bay. Loch Snizort is sometimes confined to the portion of the Loch to the S of Uig Bay. The district between Loch Snizort and Loch Dunvegan is Vaternish, which terminates in Vaternish Point at the extreme NW of the island; and that E of Loch Snizort and between it and the E coast is Trotternish. These inlets give the island an enormous extent of coast, the total length being probably over 900 miles. Most of the lochs afford sheltered anchorage, except from particular winds, but great care has to be taken in them, and indeed anywhere along the Skye coast, where mountains overhang the shore, in consequence of the violent and dangerous squalls that suddenly come whirling down from the high land, and for which Lochs Scavaig and Sligachan are particularly noted. 'There's aye wind among the gullies yonder,' says Robert Buchanan speaking about Loch Scavaig, through Hamish Shaw, in *The Hebrid Isles*, 'and the squalls at Sligachan are naething to what ye hae here. I wouldna sail aboot Scavaig in a lug-sail skiff—no, if I had the sheet in my hand and the sail nae bigger than a clout—in the finest day in summer. It strikes down on ye like the blows o' a hammer—right, left, ahint, before, straight down on your head, right up under your nose—coming from Lord kens where, though the sea be smooth as my cheek. I've seen the punt heeling o'er to the gunnel with neither mast nor sail. I mind o' seeing a brig carry away her topmast, and tear her foresail like a rag, on a day when we would hae been carrying just a reef in the mainsail of the *Tern;* and I've seen the day when the fishing-boats running out o' the wee harbour there would be taking their sails on and off, as the puffs came, twenty times in as many minutes. Many's the life's been lost off Skye, wi' the wind frae these hills.'

From the N side of Score Bay all round the N end of the island down to Loch Staffin, and beyond it, the coast is formed by precipitous cliffs of basalt, which are remarkable in many places for the great regularity of their columnar formation. The cliffs extend also down along the Sound of Raasay to Portree, and though they change their character somewhat, the cliff scenery along this whole stretch is excellent, and among the best things of its kind in Britain (see Portree). 'The coast views here,' says Robert Buchanan in *The Hebrid Isles*, referring to this tract from Duntulm to Portree, 'were beyond expression magnificent. Tinted red with dawn, the fantastic cliffs formed themselves into shapes of the wildest beauty, rain-stained and purpled with shadow, and relieved at intervals by slopes of emerald where the sheep crawled. The sea through which we ran was a vivid green, broken into thin lines of foam, and full of innumerable Medusæ drifting southward with the tide. Leaving the green sheep-covered island of Trodday on our left, we slipt past Aird Point, and sped swift as a fish along the coast, until we reached the two small islands off the northern point of Loch Staffin—so named like the island of Staffa, on account of its columnar ridges of coast. Here we beheld a sight which seemed the glorious fabric of a vision: a range of small heights sloping from the deep green sea, every height crowned with a columnar cliff of basalt, and each rising over each, higher and higher, till they ended in a cluster of towering columns, minarets, and spires, over which hovered wreaths of delicate mist, suffused with the pink light from the east. We were looking on the spiral pillars of the Quirang. In a few minutes the vision had faded; for the yacht was flying faster and faster, assisted a little too much by a savage puff from off the Quirang's great cliffs; but other forms of beauty rose before us as we went. The whole coast from Aird Point to Portree forms a panorama of cliff scenery quite unmatched in Scotland. Layers of limestone dip into the sea which washes them into horizontal forms, resembling gigantic slabs of white and grey masonry, rising sometimes stair above stair, water-stained and hung with many coloured weed; and on these slabs stand the dark cliffs and spiral columns: towering into the air like the fretwork of some Gothic temple, roofless

to the sky; clustered sometimes together in black masses of eternal shadow; torn open here and there to show glimpses of shining lawns sown in the heart of the stone, or flashes of torrents rushing in silver veins through the darkness; crowned in some places by a green patch, on which the goats feed small as mice; and twisting frequently into towers of most fantastical device, that lie dark and spectral against the grey background of the air. To our left we could now behold the island of Rona and the northern end of Raasay. All our faculties, however, were soon engaged in contemplating the Storr, the highest part of the northern ridge of Skye, terminating in a mighty insulated rock or monolith which points solitary to heaven, two thousand three hundred feet above the sea, while at its base rock and crag have been torn into the wildest forms by the teeth of earthquake, and a great torrent leaps foaming into the Sound. As we shot past, a dense white vapour enveloped the lower part of the Storr, and towers, pyramids, turrets, monoliths were shooting out above it like a supernatural city in the clouds. At every hundred yards the coast presented some new form of perfect loveliness.'

From Portree southward to Loch Alsh the coast is low, and possesses but few marked features; and the same remark may be made of the shore along the Sound of Sleat, although from it may be obtained magnificent views of the fine mountain scenery around Lochs Hourn and Nevis on the mainland side of the Sound. To the W of Sleat round Lochs Eishort and Slapin the scenery improves, and the cliffs and mountain slopes overhanging the latter are, especially under certain conditions of light and shade, very grand and impressive (see STRATHAIRD). To the W of Strathaird round Loch Scavaig the outlying ridges of the Cuillin Hills slope steeply down upon the sea without any intervening cliffs, and produce a coast remarkable for its difference of character from that of any other coast in the kingdom, and for a curious weirdness that is indicated, though with a suggestive want of accuracy in Thomson of Duddingstone's picture of the entrance to the loch (see SCAVAIG); and the lonely clift-girt gorge of CORUISK at the NW corner is the eeriest and most solemn place in Britain—'perpetual twilight, perfect silence, terribly brooding desolation.' Along Soay Sound and round Loch Brittle such cliffs as exist are low, and about the loch they are disposed in terraces, but from this to Talisker Bay, 1½ mile S of the entrance to Loch Bracadale, there is a line of lofty and picturesque cliffs. Round Talisker Bay, and all round Loch Bracadale, the shores are generally low, flat, and cultivated, as they are likewise about the E and S of Loch Snizort, and on northwards by Score Bay; but along the tract between Loch Bracadale and Loch Snizort there is a considerable amount of good rock scenery (see BRACADALE, DUIRINISH, DUNVEGAN, SNIZORT, and UIG).

All round the coast are a number of islands and islets, of which the two principal on the N have been already mentioned. To the N of Staffin Bay are Sgeir Eirin and Eilean ALTAVAIG (½ × ¼ mile), and at the E side the triangular STAFFIN Island (½ × ¼ mile). Extending down the E coast is the chain formed by SOUTH RONA, Eilean Tigh, FLADDAY, and RAASAY, and to the SE of the last is SCALPAY, opposite Loch Ainort. One mile E of the centre of Scalpay is LONGAY (5 × 3 furl.), and 2 miles SE is PABAY (⅝ × ⅜ mile), and these with the small Eilean Ban at the NW end of Kyle Akin complete the list of important islands on the E coast. Along the Sound of Sleat the only island is Isle-Ornsay, and the next of importance is Soay, to the W of Loch Scavaig. In Loch Bracadale are WIAY and the smaller Harlosh (½ × ¼ mile), Tarner (3 × 2 furl.), and Ornsay (4 × 1 furl.). Near the centre of the outer part of Dunvegan Loch is Isay or ISSAY Island, and close to it on the NE are Mingay Island (5 × ⅝ furl.) and the small Clett, while far up the southern branch are Eilean Gairbh, Eilean Dubh, Eilean Mor, with a number of small islets. Near the NW of Loch Snizort are the ASCRIB Islands, consisting of Eilean Iosal, Eilean Creagach, Eilean Garave, and South Ascrib, with some smaller islets. The only one of any size is South Ascrib (½ × ¼ mile). Near the entrance to Loch Greshornish is the small Eilean Mor. Of these only Isle-Ornsay, Pabay, Raasay, South Rona, Scalpay, Soay, and Wiay are inhabited.

Surface, etc.—The length of Skye in a straight line from Rudha Hunish south-south-eastward to Point of Sleat is 48¾ miles, and from Vaternish Point south-eastward to Isle-Ornsay, 44¾; while the average breadth of the island is about 12 miles; and the area, inclusive of foreshore, 411,703·652 acres. The breadth of the land is in some places very much more than the average, and in others much less, *e.g.*, from the E coast of Moonen Bay eastward to Portree Harbour the distance is 20 miles, while from the top of Loch Harport to the top of Loch Sligachan is only 5¼ miles, and from the head of Loch Eishort to the head of Loch na Dal is barely 1½ mile; but so much is the island indented by the extensive sea-lochs already described, that but few places are more than 3½ miles distant from the sea, and none more than 4½. The surface, with the exception of Kilmuir—the plain of which is the largest continuous tract of arable land in the island—and a small tract near Loch Bracadale, consists almost entirely of three distinct groups of hills, with intervening stretches of undulating moorland of considerable altitude. From the N end of the island the ground slopes downward from the heights overlooking the sea, and then rises again to another series of hills westward from Staffin Bay, the highest summits being Sgurr Mor (1460 feet) and Meall na Suiramach (1779), NW of the QUIRAING. The rocks are basaltic, and the cliffs in many places show fine examples of columnar structure. From this point a long ridge extends in a southerly direction towards Portree, with an average elevation at the N end of from 1000 to 1500 feet; in the centre, of from 1700 to 2300 feet; while at the S end it slopes down to about 1000, till nearly at the extremity it rises again at Beinn a' Chearcaill to 1817. The highest points from the N end southwards are Bioda Buidhe (1523 feet), Beinn Edra (2003), Creag à Lain (1995), Bac a Ruadh (2091), THE STORR (2360), and Beinn a' Chearcaill (1817). The whole extent of the ridge, with its picturesque basaltic cliffs, commands wide and extensive views. 'On the north-east, facing the sea, it dips down suddenly, with no end of picturesque craggy spurs and green knolls, very peculiar and fairy-like. Then there is a wide expanse of solitary moor, with here and there a small lake glistening in the sun, then green inhabited spots away to the coast-line, which is for many miles a lofty terrace of basalt, resting on limestone, with columns in some places as regular as those of Staffa, but on a larger scale. This whole district is called the "East Side," and there is no part of Skye more picturesque, though, with the exception of Cuiraing, which is the culminating point of interest, it is generally quite unexplored.' Apart from the cliffs the green terraced hills almost call to mind in bright weather the soft pastoral heights of the southern uplands. The second group of hills lies along the SE from the Point of Sleat to Loch Alsh, and has in the peninsula of Sleat an average altitude of from 800 to over 900 feet, the highest point being Sgòrach Breac (977) between Isle-Ornsay and the head of outer Loch Eishort. At the head of Loch na Dal the ridge is cut by the low ground between the head of that loch and upper Loch Eishort, but, immediately beyond, it reaches a height of 1427 feet at Beinn Bhreac, and passes along the coast by Beinn na Seamraig (1839) and Ben Alask (1984) to the highest summits, Sgùrr na Coinnich (2401) and Beinn na Caillich (2396) overlooking Kyle Rhea. To the W of these is Beinn na Créine (2000 feet). The hills along this part of the group descend rapidly to the sea on the SE, but slope more gently to the NW where there is a tract of low ground extending from Kyle Akin to Broadford Bay, and thence across the island to Loch Slapin, the latter portion being bounded on the E by undulating ground, the highest point of which at Beinn a Chàirn

near Boreraig is 983 feet above sea-level. Occupying the space bounded on the E by a line drawn from Broadford to the middle of the E side of Loch Slapin, and on the W by a line drawn from the head of Loch Sligachan to the head of Loch Brittle, is the wildest and most mountainous part of the island, occupied by the hills that may be spoken of collectively as the Cuillin group, of the principal summits of which the lower have a range of over 2300 feet and the higher of over 3000. The group consists of two distinct portions totally different in both rock formation and external appearance. To the NE between Broadford and Loch Sligachan are the Red Hills, which are syenitic in structure and pyramidal in shape. Formed of rock which weathers and decomposes with great readiness, their slopes are formed by masses of bright red detritus —whence the name—only relieved here and there by strips of bright green sod. View hunters often vote them tame, but seen in proper light—as all West Highland scenery must be—especially when the sun is well down in the west, and the evening clear, they present as fine a 'bit' of colour as could be wished. The principal summits are Beinn Dearg Mhòr (2323 feet) and Beinn na Caillich (2403) between the head of Loch Slapin and Broadford; Glas Bheinn Mhor (1851), S of Loch Ainort; Beinn Dearg Mheadhonach (2094), Beinn Glamaig (2537), S of Loch Sligachan; and Marsco (2414), farther S still, E of the upper part of Glen Sligachan, opposite Scuir nan Gillean. The red colour does not prevail universally, but it occupies by far the larger space, and is the more prominent from its superior brightness. The other portion consists of hypersthene rocks of Laurentian age, and noted for their dark colour. 'The darkness of that mass is indeed extraordinary, and adds much to the wildness of aspect and grandeur of effect produced by the rugged and bold outlines of the mountains of which it is formed. No light seems to harmonise their colour to its place in the general landscape; perpetual shadow seems to cover them in every state of the atmosphere, and when the clouds involve their summits a deep and dark abyss seems opened beneath into which the eye vainly endeavours to penetrate. Their exterior outline is equally remarkable, as well for the contrast it presents to the tame and smooth boundary of the Red Hills as for its peculiarly rugged and serrated form. Pinnacles and projecting crags darkly indenting the sky rise along the whole line, marking by their acuteness and permanence the durability of the rock of which they are composed.' It is this dark colour and weird outline that gives them their deep, mysterious, awe-inspiring look. 'The enormous bulks, their gradual receding to invisible crests, their utter movelessness, their austere silence daunt you. You are conscious of their presence, and you hardly care to speak lest you be overheard. You can't laugh; you would not crack a joke for the world. Glen Sligachan would be the place to do a little self-examination in. There you would have a sense of your own meannesses, selfishnesses, paltry evasions of truth and duty, and find out what a shabby fellow you at heart are; and, looking up to your silent father-confessors, you would find no mercy in their grim faces.' The Cuillin Hills proper may be said to be enclosed by lines drawn from the head of Loch Sligachan to the NE corner of the head of Loch Scavaig on the E and to the head of Loch Brittle on the W, the summits forming a long sinuous ridge from N to S, and the highest being in that order Sgurr nan Gillean (3167 feet), Bruach na Frithe (3143) to the W, Sgurr Thuilm (2885) to the WNW, Sgurr na Banachdich, near the centre of the ridge, with a NW summit (3167), a SE one, the highest point in Skye (3234), and outlying shoulders to the W and SW, Sgurr nan Gobhar (2047) and Sgurr Dearg (2012); to the SE of this is Sgurr Sgumain (3104)—with a southern shoulder 2507—Sgurr nan Eag (3037) and Gars-bheinne (2934), from which the ground slopes to Loch Scavaig. To the ESE of Sgurr na Banachdich is Loch Coruisk, to the N of which is the ridge of Drumhain, with an extreme height of 1622 feet; and

N of this again the deep, mysterious looking Harta Corrie. The eastern side of the ridge of the Cuillins proper is marked to the N by Glen Sligachan, and to the S by Strath na Creitheach opening on to the NE of Loch Scavaig at Camasunary, the two glens forming a continuous hollow across the island. To the E of Strath na Creitheach is the long black pinnacled ridge and huge precipices of 'the wonderful mountain of Blaven,' of which Alexander Smith has sung so well:—

'O Blaven, rocky Blaven!
How I long to be with you again,
To see lashed gulf and gully
Smoke white in the windy rain—
To see in the scarlet sunrise
The mist-wreaths perish with heat;
The wet rock slide with a trickling gleam
Right down to the cataract's feet;
While toward the crimson islands,
Where the sea birds flutter and skirl,
A cormorant flaps o'er a sleek ocean floor
Of tremulous mother-of-pearl.'

The top of Blaven is 3042 feet above sea-level, and there is a northern shoulder, Garbh-bheinn (2649). Between this grand mountain district and a line drawn from Loch Snizort to Portree are the little valley of Talisker, the green pastures about Lochs Brittle and Eynort, and the low open cultivated ground about Loch Bracadale; but with these exceptions the whole country is an undulating upland, averaging from 600 to 1000 feet and upwards in height, almost entirely covered with brown heath, and somewhat bleak and bare in appearance, though at the proper season even this is relieved by the great masses of purple blooming heather. The basaltic pillars at Brish-meall or Preshal More, near Talisker Bay, are worthy of notice. A number of summits to the W of the Cuillins reach a height of from 1200 to 1350 feet, but the highest points are the flat-topped Healaval More (1538) and Healaval Beg (1601), generally known as Macleod's Tables in the S of Duirinish. In Vaternish the highest point is Ben Geary (929 feet), E of Ardmore Point at the entrance to Loch Dunvegan.

Lochs and Rivers.—There are a considerable number of fresh water lochs and lochans, but none of them are of any great size, the principal being Lochs Coruisk ($1\frac{1}{2} \times \frac{1}{4}$ mile) at the top of Loch Scavaig, Leathan ($\frac{3}{4} \times \frac{1}{2}$ mile), Fada ($\frac{3}{4} \times \frac{1}{4}$ mile), both in the parish of Portree; Duagrich, in the parish of Bracadale; Cill Chriosd ($\frac{3}{4} \times$ nearly $\frac{1}{4}$ mile), na Creubhaig (7×2 furl.), both in the parish of Strath; nan Uamh ($\frac{1}{2} \times \frac{1}{4}$ mile), Dhùghaill (3×2 furl.), and a' Ghlinne (4×1 furl.), all in the parish of Sleat. Many of them abound in trout, and though all the best are preserved it is not very difficult to obtain permission to fish, while some are quite free. Loch Columkill, 2 miles N by W of Uig Bay, in Kilmuir, once the largest stretch of fresh water in Skye and covering over 300 acres, was drained many years ago. The streams are very numerous, but none of them are large except during, and after, heavy rains, when they sometimes do a considerable amount of injury. For instance, on the night of the 'Big Flood,' in October 1877, the stream from Glen Uig and the river Rha, whose mouths are generally nearly 200 yards apart, came down in such high flood that Uig Lodge, which stood on the ground between, was swept away by their united waters; while the same rainfall so flooded the streams between Uig and Portree that all the bridges along the road were carried away. The principal streams are the Kilmaluag flowing to the bay of the same name, the Kilmartin entering the S side of Staffin Bay, the Bearreraig from Loch Leathan, the Chracaig and the Leasgeary, both entering the N side of Portree Harbour, the Varragill flowing northward to the head of Portree Loch, the Sligachan flowing from Harta Corrie northward to the head of Loch Sligachan, the Broadford from Loch Cill Chriosd to the W corner of Broadford Bay, the Abhuinn Lusa entering the sea 2 miles E of Broadford Bay, the Brittle and Eynort entering the sea at the heads of the lochs of the same names, the Ord at the

S side of Loch Eishort, the Talisker at Talisker Bay, the Drynoch at the head of Loch Harport, the Ose at the E side of Loch Bracadale, the Glendale entering Loch Pooltiel, the Treaslane on the S side of Loch Snizort Beag, the Snizort at the head and the Haultin, Romesdal, and Hinnisdal on the NE side of the same loch; and the Uig and Rha at Uig Bay. The Snizort and the Varragill are the largest streams, but all those mentioned contain salmon and sea- and burn-trout.

Scenery, etc.—The grand and beautiful scenery for which Skye is noted is not to be found all over the island. As has been already indicated, much depends on the coast, and lies in the ever changing disposition and aspects of the rocks and mountain masses to be seen in sailing round the island, while in the interior the portions worth seeing are confined to certain districts—particularly about the Quiraing, Storr, and the Cuillin group of hills—and lie along certain well-known routes, and the large remaining portions are, as often as not, mere 'weary wastes expanding to the skies,' bleak, bare, and dismal. 'We passed,' says Alexander Smith in describing a drive through one of these, 'through a very dismal district of country. It was precisely to the eye what the croak of the raven is to the ear. It was an utter desolation, in which Nature seemed deteriorated and at her worst. Winter could not possibly sadden the region; no spring could quicken it into flowers. The hills wore for ornament but the white streak of the torrent; the rocky soil clothed itself with no heather. . . . Labour was resultless; it went no further than itself—it was like a song without an echo.' Yet, this notwithstanding, the constantly changing atmospheric effects on the hills, whether distant or close at hand, are always magnificent, and what is grand is grand, standing in all respects by itself in British scenery. As Sheriff Nicholson—one of the truest of the sons of the Isle of Mist—has it—

> 'Let them sing of the sunny South,
> Where the blue Ægean smiles,
> But give to me the Scottish sea,
> That breaks round the Western Isles!
> Jerusalem, Athens, and Rome,
> I would see them before I die!
> But I'd rather not see any one of the three,
> Than be exiled for ever from Skye.
> Lovest thou mountains great,
> Peaks to the clouds that soar,
> Corrie and fell where eagles dwell,
> And cataracts dash evermore?
> Lovest thou green glassy glades,
> By the sunshine sweetly kist,
> Murmuring waves and echoing caves?
> Then go to the Isle of Mist!'

Besides all this for those who are weary from excess of toil and wish for rest and change, the island has the charm of its seclusion—not now, however, quite so great as formerly, thanks to the tourist rush—and its utter unlikeness to anything on the mainland except the western districts of Ross and Sutherland, and over these it has the advantage of much greater accessibility. 'Jaded and nervous with eleven months' labour or disappointment, *there* will a man find the medicine of silence and repose. Pleasant after poring over books to watch the cormorant at early morning flying with outstretched neck over the bright firth; pleasant lying in some sunny hollow at noon to hear the sheep bleating above; pleasant at evening to listen to wild stories of the isles told by the peat-fire; and pleasantest of all, lying awake at midnight, to catch, muffled by distance, the thunder of the northern sea, and to think of all the ears the sound has filled. In Skye one is free of one's century; the present wheels away into silence and remoteness. . . . In Skye the Londoner is visited with a stranger sense of foreignness than in Holland or in Italy. To visit Skye is to make a progress into "the dark backward and abysm of time." You turn your back on the present and walk into antiquity. You see everything in the light of Ossian as in the light of a mournful sunset. With a Norse murmur the blue lochs come running in. The Canongate of Edinburgh is Scottish history in stone and lime; but in Skye you stumble on matters older still.

Everything about the traveller is remote and strange. You hear a foreign language; you are surrounded by Macleods, Macdonalds, and Nicholsons; you come on grey stones standing upright on the moor—marking the site of a battle or the burial-place of a chief. You listen to traditions of ancient skirmishes; you sit on ruins of ancient date in which Ossian might have sung. The loch yonder was darkened by the banner of King Haco. Prince Charles wandered over this heath or slept in that cave. The country is thinly peopled, and its solitude is felt as a burden. The precipices of the Storr lower grandly over the sea; the eagle has yet its eyrie on the ledges of the Cuchullins. The sound of the sea is continually in your ears; the silent armies of mists and vapours perpetually deploy; the wind is gusty on the moor; and ever and anon the jags of the hills are obscured by swirls of fiercely-blown rain. And more than all the island is pervaded by a subtle spiritual atmosphere. It is as strange to the mind as it is to the eye. Old songs and traditions are the spiritual analogues of old castles and burying-places—and old songs and traditions you have in abundance. There is a smell of the sea in the material air; and there is a ghostly something in the air of the imagination. There are prophesying voices amongst the hills of an evening. The raven that flits across your path is a wierd thing—mayhap by the spell of some strong enchanter a human soul is balefully imprisoned in the hearse-like carcase. You hear the stream and the voice of the kelpie in it. You breathe again the air of old story-books; but they are northern, not eastern ones. To what better place, then, can the tired man go? There he will find refreshment and repose. There the wind blows out on him from another century. The Sahara itself is not a greater contrast from the London street than is the Skye wilderness.'

The origin of the name is uncertain. Some say the Scandinavian *Ski*, 'cloud,' or 'vapour,' and hence *Eilean Skianach*, 'the island of mist;' others take it from the Gaelic *Skianach*, 'winged,' from the resemblance of the half-detached peninsulas to wings. The island seems to be the Scetis of Ptolemy, and the oldest form is probably Sgithidh, and there the matter must be left. During the period when the Hebrides belonged to Norway, the Norsemen, though they held the people in subjection, seem never to have made large settlements on the island, for almost all the place names except in the N and NW, and along the E coast, are Celtic, not Scandinavian. For such history as the island then had, reference may be made to the article on the HEBRIDES. Traditionary history associates many of the localities with Ossian, and during the Middle Ages the only events of local importance are connected with clan feuds which cannot be here detailed. The northern branch of the Macdonalds possessed the whole of Trotternish down as far as Portree, a strip extending along the SW coast from the W side of Loch Scavaig, along by the head of Loch Slapin to the head of Loch Eishort, all the promontory of Sleat, and the whole of the coast beyond as far as the N end of Kyle-Rhea. All the E coast from Portree to Loch Alsh, including Scalpay, belonged to the Mackinnons; Vaternish and Dunvegan to the Macleods of Lewis; and Duirinish and the SW coast down to Loch Scavaig inclusive of Soay, to the Macleods of Harris. The support the clans afforded to the various rebellious Lords of the Isles led to many royal expeditions against them, one of the most noteworthy being that commanded by James V. in person in 1542. The incidents connected with the adventures of Prince Charles Edward Stewart after the battle of Culloden will be found noticed under the places with which they are more immediately connected, as will also those connected with the visit of Dr Johnson in 1773. Of more recent history the island had none till 1881, when the bad seasons that have prevailed, and the partial failure of the fishing industry with which so many of the people are connected, began to cause distress among the crofter population, and this, having led them to lend a willing ear to land-law agitators, produced such

a state of matters, that large bodies of the 'law-abiding and generally contented' people of the Report of the Agricultural Commissioners in 1881 were, in 1883-85, openly banded together to offer resistance to all constituted authority. So lawless had proceedings become in 1883-84 in regard to seizure of grazings belonging to adjacent sheep farms of large size, defiance of consequent interdicts of the Court of Session, and resistance to the police, that a special police expedition had to be despatched by steamer from Glasgow, and ultimately a gun-boat sent to make arrests, and the police force of the county of Inverness was temporarily increased by fifty men. After a lull, fresh disturbances of the same nature, and culminating in a determined assault on a number of policemen, took place, and in the end of 1884 it became necessary to send to the island an armed expedition, consisting of a troop-ship, two gun-boats, and a steamer with a special police force. A large body of marines was landed and marched through several of the disturbed districts, and small bodies of them left at one or two points to protect police forces there stationed. The partial withdrawal of the soldiery has again in 1885 proved the signal for fresh outrages, in connection with which a number of men from two of the most disturbed districts, at Valtos near Loch Staffin and Glendale, have recently been committed for trial. There the matter at present rests, but it is to be hoped that ere long wiser counsels may lead to the restoration of the old peaceful habits. The present popular methods of showing the existence of poverty are scarcely such as will produce a remedy.

Geology.—None of the Western Isles presents more remarkable geological phenomena than Skye. The greater part of the island is occupied by contemporaneous and intrusive volcanic rocks of Tertiary age, the former being arranged in great horizontal sheets piled on each other to a considerable depth. At intervals, round the coast, fragments of Secondary strata, ranging from the Poikilitic beds underneath the Lias to the horizon of the Oxford Clay, are met with. Originally buried underneath a vast pile of basaltic lavas, these fossiliferous Secondary rocks have been exposed by denudation, and though their development is but limited, they are of the highest importance in enabling the geologist to interpret the history of the Mesozoic formations in the N of Scotland. Skye has always been a favourite resort for students of geology. The researches of Macculloch, Professor Edward Forbes, Dr A. Geikie, Dr Wright, Dr Bryce, Professor Judd, and others have thrown much light on the geological history of this interesting island so far as the Secondary formations and Tertiary volcanic rocks are concerned. The geological structure of the SE peninsula extending from Kyle-Akin to the Point of Sleat is, however, rather complicated. This area is occupied by Cambrian strata and crystalline schists, lying in the line of strike of the great terrestrial displacements extending from Strome Ferry to Loch Eriboll. Hence the sections in Sleat must be read in the light of recent investigations in the counties of Sutherland and Ross.

According to the description given by Macculloch, it would appear that the metamorphic rocks along the shore of the Sound of Sleat S of Isle-Ornsay consist of gneiss, chlorite schist, mica schist, and hornblende schist, with a general inclination to the SE. The characteristic feature of the gneiss is the presence of pink felspar associated with black mica and quartz, the lamination being very apparent. Near Loch Oransay a bed occurs containing white felspar, with needle-shaped prisms of hornblende, and another with actinolite. The strata just described when followed towards the NW seem to be underlaid by mica schist and greywacke schist, their general inclination being to the SE. Within a short distance, however, they fold over towards the NW, and on advancing to the head of Loch in Daal, quartz-rock and hard brown and grey sandstone are associated with the greywacke schist. Beyond the latter locality the strata bend again towards the SE, and from this point to the head of Loch Eishort there is an alternation of schistose beds, with varieties of quartz-rock and red sandstone. In the geological map published by Macculloch, the whole of the N portion of the Sleat peninsula and a large part of the S portion are represented as being occupied by red sandstone, quartz-rock, and schist. According to the researches of Murchison and Geikie, this peninsula originally formed an anticlinal arch of Cambrian sandstone overlain by quartz-rock, limestone, and schists, since truncated by great faults running parallel with the strike of the beds. The red sandstones crop out on the coast between Kyle-Akin and the base of the Secondary formations, and they also occur along the shore from the head of Loch Eishort to Sleat Point. At Ord, on the shore of Loch Eishort, the red sandstones are overlain by white quartzites, with a high inclination to the NW, followed by limestone, which, according to the same authorities, are the equivalents of the quartzites and limestones of Assynt and Eriboll. The limestone is again followed by quartzite, but the strata seem to be traversed by a series of powerful faults.

On the shore opposite Balmacarra the series of red and grey quartzose flagstones are exposed with a general SE dip, which continues towards Kyle-Rhea, and at Isle-Ornsay they appear to graduate upwards into schist and gneiss.

The lowest members of the Secondary formations rest on the Cambrian sandstones with a marked uncomformability. The relation between the two may be seen at several points in Strath, and particularly on the shore at Lussay, where the Poikilitic strata, marking the base of the Lias, consist of a thin layer of conglomerate, followed by variegated marls and clays, with sandy clays and calcareous concretions. These beds are overlain by the representatives of the Infra Lias graduating upwards into a fine development of the Lower Lias exposed on the shore of Broadford Bay from Obe Breakish to the village of Broadford. The latter consist of black micaceous shales, with occasional limestone bands replete with fossils, such as *Ammonites Bucklandi*, *Gryphæa arcuata*, *Lima gigantea*, *Cardinia Listeri*, etc. The beds just described are overlain by similar black shales with occasional limestone bands, but presenting certain differences in their fossil contents. According to Professor Judd the most prominent feature is the absence of the typical *Ammonites Bucklandi*, and the abundance of other species, such as *A. semicostatus*. It is obvious that in this area the lithological characters of the Lower Lias do not quite correspond with those met with in England, but in districts of the West Highlands S of Skye this divergence is not so apparent. The representatives of the Middle Lias consist of dark sandy shales, with limestone nodules charged with *Ammonites armatus*, *A. Jamesoni*, *Belemnites elongatus*, graduating upwards into calcareous sandstones, the characteristic forms being *Ammonites spinatus*, *Belemnites elongatus*, etc. These beds occur at Strathaird between Loch Slapin and Loch Scavaig, on the S side of Portree Harbour, and also on the shore at Prince Charlie's cave on the E coast. Next in order comes a thin series of beds representing the Upper Lias, consisting of finely laminated blue clays, with argillaceous nodules, iron pyrites, and some jet, averaging about 80 feet in thickness, yielding the following typical fossils: *Ammonites serpentinus*, *A. radians*, *A. communis*, *Posidonomya Bronni*, etc. This horizon, which was first detected by Dr Bryce and Professor Tate, occurs in Strath, at Strathaird, and also at Prince Charlie's Cave N of Portree.

To these beds succeed an important group of strata of the age of the Lower Oolite, which attains a remarkable development in Skye. From the descriptions of Murchison, Bryce, Tate, and Judd, it would appear that the order of succession of the beds is obscured by numerous intrusive sheets of dolerite; but notwithstanding this fact they are divisible into the following zones: (*a*) at the base, sandy micaceous shales and sandstones, with bands of shelly limestone containing *Ammonites Murchisonæ*, *A. corrugatus*, *Belemnites giganteus*, etc.;

(*b*) shales and sandstones with large concretions, with occasional marine fossils; (*c*) probably an estuarine series consisting of white sandstones, with some shales containing much carbonaceous matter; (*d*) limestones made up of comminuted shells, resembling the horizon of the English Cornbrash or Forest Marble. Perhaps the best section of these strata is to be found in the cliff above Prince Charlie's Cave, but they may also be examined on the shore both N and S of Portree Bay. According to the researches of Professor Judd the Lower Oolite beds in Skye are succeeded by a great estuarine series consisting of massive white and grey sandstones, occasionally calcareous and conglomeratic, with wood and plant remains. These graduate upwards into shales and shelly limestones, with oysters and fibrous carbonate of lime, which are exposed on the shore at Loch Staffin on the E side of Trotternish, at Aird, Duntulm, at Stein in Loch Bay on the W coast, and also at Copnahow Head. Owing to the injection of igneous masses of Tertiary age the members of this series have undergone considerable alteration, the sandstones being converted into quartzite, the clays into Lydian stone, and the limestones into marble. Finally we have a considerable development of dark blue clays, with septarian nodules, which, from the nature of the fossils, undoubtedly belong to the horizon of the Oxford Clay, and form the highest beds of the Secondary formations in Skye. These strata, which occur at Loch Staffin, Duntulm, and in Uig Bay, have yielded the following characteristic forms: *Ammonites cordatus*, *A. Williamsoni*, *Belemnites sulcatus*, *B. gracilis*, *Ostrea Roemeri*, etc. Professor Judd has shown that the remarkable features presented by the Storr Rocks and the Quirang are due to the slipping of huge superincumbent masses of basalt over these plastic clays, and similar phenomena in the neighbourhood of Uig have been figured and described by Mr A. Ross, Inverness.

The great development of volcanic rocks in Skye forms one of the most striking geological features in the island. The serrated peaks of the Coolins, the smooth cone-shaped masses of the Red Mountains, the great basaltic plateaux in the N part of Skye, are due to the peculiar characters of the igneous rocks and their mode of weathering. The evidence in favour of the Tertiary age of these volcanic masses and the theories which have been advanced to explain their physical relations will be stated in the general article on the Geology of Scotland. At present it will be sufficient to indicate the character and distribution of the igneous rocks. They include (1.) two distinct types of intrusive rocks, consisting of an acidic series and a basic series; (2.) a remarkable development of contemporaneous volcanic rocks. Beginning first with the intrusive rocks, we find that the acidic series is represented by pink granite, syenite, and hornblendic felsite, which form picturesque cone-shaped mountains between Loch Sligachan and Broadford. These masses are coarsely crystalline as a rule, save towards the outer limits, where they come in contact with the sedimentary strata through which they have been erupted. On the slopes of Ben Glamaig, E of Loch Sligachan, the mode of weathering of the Red Mountains may be studied with advantage. The crystalline constituents of the granite crumble away under the influence of atmospheric agencies, giving rise to a comparatively smooth or dome-shaped eminence. Far otherwise is it with the basic intrusive rocks so grandly developed in the Coolin Mountains round Loch Coruisk. Consisting of coarsely crystalline dolerite and gabbro of a dark grey tint, the masses weather with serrated peaks, owing to the presence of crystals of diallage and augite. Sometimes these crystals reach an unusual size, possessing a marked bronzy lustre, and where the felspars have been decomposed, they cause the rock to assume a peculiar jagged surface. The geologist who rambles round the shores of Loch Coruisk cannot fail to observe the striking contrast between the glaciated contour presented by the lower slopes of the mountains and the valleys on the one hand, and the jagged peaks of Blabheinn and the

Coolins on the other. From an examination of the relations between the granites and the gabbros, Professor Judd has inferred that the former were erupted before the latter, and that the gabbros and dolerites belong to the same epoch of volcanic activity as the basaltic plateaux which now fall to be described. From the shores of Loch Sligachan and the Coolin Hills, N to the headlands of Trotternish, Vaternish, and Dunvegan, there is one continuous succession of basaltic lavas preserving throughout this wide area a striking horizontality. The presence of thin seams of coal between the sheets of basalt and the absence of sedimentary deposits point to the conclusion that these volcanic ejectamenta were subærial and not submarine. The terraced slopes of the hills, and the horizontal lines traceable along the cliffs, coupled with the slaggy characters of the upper and under surfaces of the flows, indicate the successive discharges of the igneous materials. But in addition to these great contemporaneous sheets of lava there is sufficient evidence to show that at a later date they were pierced by veins, dykes, and sheets of dolerite and basalt. The occurrence of numerous basalt dykes forms one of the characteristic features of the history of this period of volcanic activity. They are to be found in great numbers in the metamorphic rocks of Sleat, and they pierce all the Secondary formations as well as the volcanic plateaux. Usually they display a marked columnar arrangement at right angles to the walls of the dykes, and in the centre they are more coarsely crystalline than at the edges.

Soil and Agriculture, etc.—The climate of Skye is very moist, but not more so than that of many places, such as Greenock and Fort William, on the mainland. The air is, however, almost constantly laden with vapour; and rain falls, though not always in large quantities, on about 250 days throughout the year. The average rainfall is about 65 inches, but in exceptionally wet seasons it is sometimes over 100 inches. The prevailing winds are westerly or south-westerly, and being intercepted by the hills as they come from the Atlantic laden with vapour, clouds are formed, which sometimes break in useful and refreshing showers, but at other times burst like water spouts, deluging the lower grounds and injuring the crops. The mean annual temperature for the winter months is 40°, and for the rest of the year about 50°. In Kilmuir and Vaternish and round Loch Bracadale there is some fine clayey land, with a subsoil of rotten rock of different kinds, much of it limestone and volcanic deposits; and some haughs along the streams at several points are almost equally good. The rest of the arable land—the whole amount of which is but small—lies along the seaboard, and the soil is either light or peaty. The soil on the grazing lands is sometimes clayey, but it is mostly peaty; and, indeed, peat and stones ruin a considerable extent of land that might otherwise produce good returns, and thus a very large portion of the surface is, for economic purposes, practically almost valueless, and will, it is to be feared, always remain in that state, so great is the expense of draining and improving, and so uncertain the prospect of any return. The want of sunshine and the damp climate render harvest late, and the exposure to rain and to the stormy winds that set in about the end of August and the beginning of September do a great deal of damage to the ripe standing crops, the wind, in some seasons, as in 1882, completely threshing and destroying the grain just as it is ready to be cut. Much, even, of the pasture land is covered with heath and very coarse grass, with tracts of better herbage occurring here and there. Good land is estimated to be worth 10s. an acre, medium 6s., and poor about 2s. 6d. There is almost no land under wood except about Armidale Castle, Dunvegan Castle, and Skeabost. On Lord Macdonald's estate, a tract to the S of Loch Sligachan, extending to 10,350 acres, is set apart as a deer forest—the only one in the island. The arable land is most extensive in Snizort, Bracadale, and Sleat, and the greater part of it is in the hands of crofters, the total

number of holdings in the island in 1883, with a rental of under £30 a year, being 1922. About 700 of these tenants pay under £4 a year, about 1000 from £4 to £10, about 200 from £10 to £20, and only about 50 over £20. The average number of persons belonging to each crofter family was slightly under 6, the average arable acreage 4·8 acres, the number of horses kept about 1 to every 2 crofts, of cattle nearly 3 for each croft, and of sheep about 10. These holdings are much too small to support the owners and their families, and in consequence the crofter has always to add some other employment to his farming. A number of them eke out their livelihood by temporary removal to the mainland where they work as labourers, and a still larger number have to trust largely to their wages as 'hired men' while engaged at the east coast herring fishing in June, July, and August. During the winter fishing is also carried on at home, but in this the men are greatly hindered by the want of adequate appliances and the lack of harbours; and it has also the bad effect of keeping the crofter by the sea-shore. He cannot afford to go inland and improve ground, as it would take him away from the source of a considerable portion of his winter means of living. This necessarily causes limitation in the number of the population that the island can maintain, and should this limit be exceeded, there must be, as there now is (1885), a large amount of poverty and misery among the people. The only remedies seem to be enlarging the holdings so that each will maintain a family—though here a difficulty arises as to stock—and constructing harbours so that a race of fishermen pure and simple may subsist along the coast. Here, however, the difficulty of getting the fish to market arises, so that this would need improved communication. Whatever surplus population, if any, remained after this would have to move elsewhere. The crops grown on the larger holdings are oats, potatoes, and turnips, but on the smaller ones only oats and potatoes. The grain crop yields a return of only about 3 to 3½ times the seed, and in this respect things must be very much worse than in 1549, when Dean Monro describes the island as 'fertill land, namelie for aitis, excelling aney uther ground for grassing and pastoures;' and Martin, writing in 1703, says, 'The soil is very grateful to the husbandman. I have been shown several places that had not been tilled for seven years before, which yielded a good product of oats by digging, though the ground was not dunged, particularly near the village Kilmartin, which the natives told me had not been dunged these forty years last. Several pieces of ground yield twenty, and some thirty fold when dunged with sea-ware. I had an account that a small tract of ground in the village Skerrybreck yielded an hundred fold of barley.' What he says about the fallow and the manuring is, however, suggestive, and it is hardly to be wondered that the power of the soil should have become exhausted under the constant cropping that it has undergone, oats and potatoes alternating year after year, or one crop of potatoes being taken to two of grain, while little or no manure was applied, except some poor compost or exhausting sea-weed. Lime is worked both at Broadford and in Vaternish, but it is not of a quality very suitable for agricultural use, and most of what is so employed is brought from the N of Ireland. The soil seems to suit turnips, and where they are grown the return in an average season is from 16 to 20 tons, and potatoes yield about 5 tons, but they generally suffer much from disease. The cattle are of the black west-highland breed, and the sheep are Cheviots and blackfaces, mostly the former. The cattle are generally disposed of at the markets held at Broadford in May, August, and September, at Portree in May and August, and at Sligachan in August and September. A graphic picture of market day at Broadford is given in Alexander Smith's *Summer in Skye*. The sheep are sold at Inverness, Muir of Ord, and Falkirk markets, and the wool mostly on commission in Glasgow and Leith, though a considerable quantity goes also to the woollen manufactory at Portree,—the making of winceys, etc., there carried on, being the only manufacture in the island.

The making of kelp, once so extensively prosecuted, is now practically extinct. The magnitude of this industry and the causes of its decline have been already noticed in the article on the Hebrides, and its importance in Skye may be gathered from the estimate formed, that in some years prior to 1830 Lord Macdonald's annual gross income from this source was over £20,000, of which at least £9000 would be payed in wages to the people employed in the manufacture. Skye is combined with Loch Carron to form one of the fishery districts of Scotland, and the number of first-class boats belonging to this in 1883 was 29; of second-class boats, 172; of third-class boats, 542; but of these, probably, not one-third belonged to Skye itself. The number of fishermen and boys employed in 1883 was 2575; and of other persons, 1487; and the value of the boats was £6344, of the nets £21,132, and of the lines £2879. Fifty-nine vessels were also fitted out for the same purpose, and the total number of barrels of herring salted or cured in the district was 5282 (77,783 in 1882); and the number of cod, ling, and hake taken was 32,240.

The crofter communities have their houses in each district close together on their patches of arable land, the group so formed constituting a township. The houses are very miserable structures, generally consisting of two rooms of which the outer is the byre. The walls, formed of rough masses of unhewn stone, are some 5 or 6 feet thick, and about the same height, the middle portion being sometimes filled up with heather or turf; and the corners are rounded off. The thatch roof is secured against wind by a network of straw or heather ropes, held down at the ends by large blocks of stone. There is often no window, or if there be one it is merely a single pane of glass inserted in the thatch or in a turf-packed hole in the wall prepared for its reception. The island being practically destitute of wood, the rafters are valuable possessions, and many were the complaints before the recent Crofters' Commission as to non-compensation for these precious pieces of timber. The peat fire is on a stone or stones in the middle of the clay floor, and as there is either no chimney or merely a hole in the roof to serve for that purpose, the smoke either lingers all over the place, sinking into the thatch overhead and forming with it a sooty compound that will by and by become valuable as dressing for the cultivated land, or finds its way out at the half open door, as best it can. The people are in no way different from those of the Hebrides generally, and the remarks made in the article on the whole group as to their present condition, and the changes that have taken place during the past century, are equally applicable here.

Skye and the adjacent smaller islands form a judicial division of Inverness-shire, with a resident sheriff-substitute, and Portree as the seat of the sheriff-court. It is divided into the 7 *quoad civilia* parishes of Kilmuir, Snizort, Duirinish, Bracadale, Portree, Strath, and Sleat, which include also the *quoad sacra* parishes of Halin-in-Vaternish and Stenscholl, in the articles dealing with which, or in separate notices, all the chief points of interest will be found more particularly described. The seven civil parishes form a poor-law combination with a poorhouse near Portree containing accommodation for 75 inmates. Portree, with a population of 893 in 1881, is the only place that can be called a town; the villages are Broadford, Kyle-Akin, Isle-Ornsay, and Uig; and there are a considerable number of townships scattered round the coast. There is communication with the mainland by means of ferries at Kyle-Akin and at the S end of Kyle-Rhea; and by steamers from Glasgow and from Strome Ferry, as is noticed under Portree. Good main lines of road traverse the coasts of the island on both sides except between Staffin Bay and Portree, at the W side of Sleat, at Minginish, and at Duirinish, but the district roads are few and mostly poor. Of the whole area of the island it has been estimated that Macleod of Macleod possesses 141 000 acres, Lord

Macdonald 129,000, Major Fraser of Kilmuir 45,000, the trustees of M'Leod of Glendale 35,000, Mr Wood of Raasay 17,000, Mr Robertson of Greshornish 15,000, Mr Macalister of Strathaird 13,000, Captain Macdonald of Vaternish and Loch Bay 8000, Mr Macdonald of Skeabost 6289, Mr M'Donald of Lynedale 5000, Dr Martin of Glendale 5000, and Mr Macdonald of Treaslane 3000, but from the quality of the land held, the rental is not at all in proportion to the area, that of Lord Macdonald being £2000 more than that of Macleod of Macleod, while for his 8000 acres Captain Macdonald draws more than M'Leod of Glendale for his 35,000. Pop. (1821) 20,627, (1841) 23,082, (1861) 18,908, (1871) 17,330, (1881) 16,889, of whom 8903 were females and 16,099 Gaelic-speaking. Houses (1881) 3483 inhabited, 47 vacant, 6 building.

The Established Church has a PRESBYTERY OF SKYE in the synod of Glenelg. It embraces all the Skye parishes already mentioned, as well as the parish of SMALL ISLES, and mission stations at Braes and Kyle-Akin. The Free Church has also a Presbytery of Skye embracing the charges at Bracadale, Duirinish, Kilmuir, Portree, Raasay, Sleat, Snizort, and Strath in Skye, and those of Carinish, Harris, North Uist, South Uist, and Tarbert in the Outer Hebrides. The only other places of worship in the island are a U.P. church at Portree, a Baptist church at Broadford, and an Episcopal church at Caroy.

See also Martin's *Description of the Western Islands of Scotland* (1703; reprint, Glasg. 1884); Dr Johnson's *Journey to the Western Islands of Scotland* (1775); Boswell's *Tour to the Hebrides* (1785); Gregory's *History of the Western Highlands and Isles of Scotland* (Edinb. 1836; 2d ed., Glasg. 1881); Macculloch's *Description of the Western Islands of Scotland* (1819), and his *Highlands and Western Isles of Scotland* (1824); Alexander Smith's *Summer in Skye* (Edinb. 1865); Buchanan's *The Hebrid Isles* (1883); the appendix to the *Report of the Royal Commission on Agriculture* (1881); and the *Report of the Crofters' Commission* (1884).

Skyreburn. See ANWOTH.

Slaim, Loch. See BORGIE and CRAGGIE.

Slains, a coast parish of Buchan, E Aberdeenshire, containing the fishing-village of COLLIESTON, 6 miles E by S of Ellon, under which it has a post office. It comprises the ancient parish of Forvie; in outline resembles a triangle, with south-south-westward apex; and is bounded N by Cruden, SE by the German Ocean, and W by Foveran and Logie-Buchan. Its utmost length, from N by E to S by W, is 7 miles; its utmost width is 4⅝ miles; and its area is 9276 acres. The Burn of Forvie flows 4⅝ miles south-by-westward along the western border to the tidal YTHAN, which, with a high-water breadth here of from 1 furlong to ¼ mile, winds 2¾ miles south-by-eastward to its mouth in the German Ocean along all the rest of the Logie-Buchan and Foveran boundary. At Waterside of Slains it is crossed by a bridge, erected in 1876 at a cost of £4000. The coast-line, 6⅝ miles in extent, has a general south-south-westerly trend, and S of Hackley Head is fringed by the Sands of Forvie, a desert of links between the sea and the Ythan, rolled into knolls and little peaks, and scantily covered with bent. Tradition differs as to the date when Forvie was overwhelmed by sand, one account referring it to the middle of the 15th century, another to the reign of James VII.; but both concur in ascribing the calamity to a furious nine days' easterly gale. Northward the coast grows rocky and precipitous, attaining 100 feet at Hackley Head, 131 near the parish church, 193 near Oldcastle, and 122 at Bruce's Haven. The cliffs are indented by numbers of little creeks, are torn and piled in terrible confusion, exhibit deep ghastly chasms, and are pierced profoundly with numerous caverns. One of the caves, Hell's Lum, is upwards of 200 feet long, and in places 30 feet high; another, the Dropping Cave or White Cave of Slains, is so richly incrusted with stalactites, and profusely watered with the calcareous drippings from a porous rock which forms them, that though the whole was swept away for transmutation into manure, a new coating, similar in appearance to carved white marble, was very rapidly formed. In the old smuggling days so well described in John Skelton's *Crookit Meg* (1880), these caves were great contraband storehouses; and a spot near the church was the scene of a desperate fray, in which Philip Kenney was slain by a revenue officer, 19 Dec. 1798. A round hill of solid rock near the manse is pierced by the 'Needle's Eye,' a fissure 30 yards long, 4 feet wide, and 20 to 30 feet high, through which, in an easterly gale, the waves rush with terrific violence. In a neighbouring creek, St Catherine's Dub, the 'St Catherine,' one of the Spanish Armada, was wrecked in 1588; and a cast-iron gun was raised here in 1855. Along the western border the surface declines to less than 50 feet above sea-level; but elsewhere the interior is high though hardly hilly, attaining 264 feet near the northern boundary and 216 at the Kippet Hills on the northern shore of the MUCKLE LOCH (4 × 2⅓ furl.; 134 feet). This, lying towards the centre of the parish, is much the largest of four small fresh-water lakes, the others being Little, Cotehill, and Sand Lochs. Gneiss and mica slate are the chief rocks of the cliffs; gravel and small limestone boulders form the Kippet Hills; and a caustic calcareous sand, suitable to be spread over newly reclaimed clay land, and long used in a general way as a manure, prevails over much of the sandy waste. The soil is of every variety, from the lightest sand to the heaviest clay. A great extent of land, formerly waste, has been reclaimed, and more than 7000 acres are now under the plough. On Brownhill farm the late Mr Gordon of Cluny introduced the steam plough into Aberdeenshire, 24 April 1872. Only at Pitlurg are there any trees, and they have a stunted appearance. The chief antiquity is the ruin of Slains Castle, crowning a steep peninsulated rock, 120 feet high, whose base is washed by the sea. This castle was very extensive and of great strength, the only approach to it being a narrow defile which a handful of brave men could have held against any force; but a fishing village, with about 80 inhabitants, now occupies most of its site. From the early part of the 14th century it was the stronghold of the Hays of Erroll, but was demolished in 1594 by James VI., on occasion of the eighth Earl of Erroll having joined in the Earl of Huntly's rebellion. The foundation of the old church of Forvie may still be traced on the Links; and 3 furlongs SSE of Pitlurg is the ivied gable of St Adamnan's Chapel, with a Gothic window nearly entire. William Robinson Pirie, D.D., Principal of Aberdeen University, was born at the manse in 1804. Pitlurg House, 6 miles ENE of Ellon and 3¼ N by W of Collieston, was built in 1828, and belongs to Alexander Gordon-Cumming-Skene, Esq. of PARKHILL. Slains is in the presbytery of Ellon and the synod of Aberdeen; the living is worth £294. The parish church, ¼ mile N by E of Collieston, was built in 1806, and contains 654 sittings. It was thoroughly repaired and renovated in 1882; and a new manse was built in 1876. There is also a Free church; and three schools —Collieston public, Slains public, and the endowed Bruce-Hay girls'—with respective accommodation for 50, 100, and 72 children, had (1884) an average attendance of 55, 66, and 40, and grants of £40, 6s., £45, 4s., and £31, 1s. Valuation (1860) £6328, (1885) £6838, 5s. 9d. Pop. (1801) 970, (1831) 1134, (1861) 1266, (1871) 1355, (1881) 1256, of whom 421 were in Collieston.—*Ord. Sur.*, shs. 87, 77, 1876-73.

Slains Castle, the seat of the Earl of Erroll, in Cruden parish, Aberdeenshire, on the brink of a lofty sea-cliff, 1½ mile SSW of the Bullers of Buchan, 5 miles NNE of Old Slains Castle, and 7 SSW of Peterhead. Built in 1664, and much extended at several periods, it was, with exception of the lower part of its original tower and of two other small portions, rebuilt in 1836-37; and now is a stately and commodious edifice. Dr Johnson, who was here in 1773, described it as 'built upon the margin of the sea so that the walls of one of the towers seem only a continuation of a perpendicular rock, the foot of which is beaten by the

waves. To walk round the house seemed (and is) impracticable. From the windows the eye wanders over the sea that separates Scotland from Norway, and, when the winds beat with violence, must enjoy all the terrific grandeur of the tempestuous ocean. I would not, for my amusement, wish for a storm; but as storms, whether wished for or not, will happen, I may say, without violation of humanity, that I should willingly look out upon them from Slains Castle.' William Harry Hay, twenty-second Hereditary Lord High Constable of Scotland since 1315, and eighteenth Earl of Erroll since 1452 (b. 1823; suc. 1846), holds 4249 acres in the shire, valued at £4268 per annum.—*Ord. Sur.*, sh. 87, 1876. See LUNCARTY, ERROL, and SLAINS.

Slamannan, a village and a parish of SE Stirlingshire. The village stands near the right bank of the Avon, 5¾ miles SSW of Falkirk and 5 furlongs N by W of Slamannan station on the Slamannan section (1840) of the North British railway, this being 4⅛ miles W by S of Blackston Junction, 9⅛ ENE of Coatbridge, and 17¾ ENE of Glasgow. It has a post office, with money order, savings' bank, and telegraph departments, a branch of the Bank of Scotland, 3 hotels, and gasworks. Pop. of village (1861) 482, (1871) 681, (1881) 1644, of whom 419 were in Blinkbonny. Houses (1881) 322 inhabited, 7 vacant, 1 building.

The parish contains also the conjoint villages of Balquhatston Row and Arnloss Colliery, of Binniehill and Southfield, and of Limerigg and Lochside. In outline rudely resembling an obtuse angled triangle with southward apex, it is bounded N by Falkirk and Muiravonside, SE by Torphichen in Linlithgowshire, and SW by New Monkland in Lanarkshire. Its utmost length, from E to W, is 6 miles; its utmost breadth, from N to S, is 3½ miles; and its area is 7148 acres, of which 86⅛ are water. The river Avon or AVEN winds 8 miles east-by-northward and east-by-southward along all the Falkirk and Muiravonside boundary; and Polness or Drumtassie Burn runs 4¾ miles north-eastward along nearly all the Torphichen boundary, till it falls into the Avon at the eastern extremity of the parish. Triangular BLACK LOCH (½ × ½ mile) lies just on the New Monkland border; and 5 furlongs ENE is Little Black Loch (1¾ × 1 furl.). The surface is flattish, sinking along the Avon to a little less than 500 feet above sea-level, and attaining a summit altitude of 707 feet near the Little Black Loch. The lands adjacent to the Avon, to the breadth of about a mile, comprise much haugh and meadow, and are subject to floods after heavy rains. The rocks are mainly carboniferous, and include great quantities of excellent coal and ironstone. Mining employs a large proportion of the population; and the manufacture of coke is extensively carried on. The soil of the haugh and the meadow lands is light and fertile; and that of the higher tracts is partly a good loam, partly strong hard clay, partly black mossy earth, and partly moor or wet moss overlying a bed of sand. Much ground, formerly heathy or swampy, has been reclaimed into good arable condition. Part, or perhaps the whole, of the parish was obtained in 1470] from James II. by Lord Livingstone; and, along with the advowson of the church, was held by his lordship's successors, the Earls of Linlithgow and Calendar, till their attainder in 1716. The parish in pre-Reformation times was called St Laurence—on account of the dedication of its church to this saint; and, in legal instruments, it is still designated 'the parish of Slamannan, otherwise St Laurence.' An excellent fountain, a little SE of the church, bears the name of St Laurence's Well. A mansion, noticed separately, is BALQUHATSTON; and 6 proprietors hold each an annual value of £500 and upwards, 8 of between £100 and £500. Since 1730 the southern portion of Falkirk parish has been annexed ecclesiastically to Slamannan, which is in the presbytery of Linlithgow and the synod of Lothian and Tweeddale. The living is worth £319. The parish church was built in 1810, and contains upwards of 700 sittings. There are also Free and Methodist churches, besides an Evangelical Union church at Avonbridge; and five schools—Avonbridge public, Limerigg public, Slamannan public, Drumclair Colliery, and Slamannan Free Church—with respective accommodation for 166, 282, 416, 126, and 148 children, had (1884) an average attendance of 90, 237, 414, 102, and 142, and grants of £100, 18s., £153, 14s. 6d., £277, 11s. 6d., £67, 6s., and £115, 18s. Valuation (1860) £8902, (1885) £22,606, 10s. 3d. Pop. of civil parish (1801) 923, (1841) 979, (1861) 2916, (1871) 4164, (1881) 5850; of ecclesiastical parish (1871) 4847, (1881) 6428.—*Ord. Sur.*, sh. 31, 1867.

Slapin, a sea-loch on the S side of Strath parish, Isle of Skye, Inverness-shire, striking at right angles from the mouth of Loch Eishort, and penetrating 4¼ miles north-by-westward to within 3 miles of the head of Loch Eynort, on the opposite side of the island. Across the entrance it measures 2⅛ miles, and thence narrows gradually to a point. It goes parallel with Loch Scavaig, and, in common with that sea-loch, is sublimely overhung by Blabhein (3042 feet).

Slate. See SLEAT.

Slateford, a village in Colinton and St Cuthberts parishes, Edinburghshire, on the Water of Leith and the Union Canal, ¼ mile SSW of Slateford station on the Caledonian railway, this being 2⅛ miles SW of the Edinburgh terminus. It has a post office, with money order, savings' bank, and telegraph departments, a bridge, a canal aqueduct, a railway viaduct, a plain old U.P. church, a public school, a Good Templar's hall (1872), a police station, and the extensive bleachfield of Inglis Green. The Rev. John Dick, D.D. (1764-1833), afterwards professor of theology to the Associate Synod, was minister here from 1786 to 1803; and Robert Pollok (1799-1827), author of the *Course of Time*, spent the last summer of his life with Mr Dick's successor, the Rev. John Belfrage, M.D., and preached once or twice in his church. The aqueduct and the viaduct are magnificent works, the former 500 feet long and 65 high; and they and the bridge stand so near one another, and have such different heights, as to form a curious scene. Pop. (1841) 221, (1861) 514, (1871) 647, (1881) 621, of whom 519 were in Colinton parish.—*Ord. Sur.*, sh. 32, 1857.

Slateford, a small village in Maybole parish, Ayrshire, 1¼ mile N by E of the town.

Slateford, Forfarshire. See EDZELL.

Slate Islands, a group of islands off the mainland of Lorn district, Argyllshire. It commences 7½ miles SSW of Oban, and terminates 4½ miles N by W of Craignish Point; measures about 10 miles in length from N to S, and about 3½ miles in breadth; is separated from the mainland, and intersected in its several parts, by narrow straits; takes its name from consisting largely of fissile clay slate, well adapted for roofing purposes; and exhibits, throughout shores and surfaces, such mixtures of rock and wood, of height and hollow, as form an assemblage of charming close views. Its chief islands are Luing, Shuna, Torsay, Seil, Easdale, and Balnahuaigh, all of which are separately described.

Sleat, a parish in the SE of the Isle of Skye, containing the coast village of ISLE-ORNSAY, 11 miles SSE of Broadford, under which it has a post office, with money order, savings' bank, and telegraph departments. It is bounded at its north-eastern extremity by Loch Alsh and by KYLE-RHEA (⅛ mile broad), along all its south-eastern side by the Sound of Sleat, and along its north-western by the Atlantic, Loch Eishort, and Strath parish. Its utmost length, from NE to SW, is 21⅛ miles; its utmost breadth is 5¼ miles; and its area is 65¼ square miles or 41,757 acres, of which 1339⅝ are foreshore and 458⅛ water. Loch na Dal indents it on the SE side to a depth of 1⅛ mile, and leaves an isthmus only 1½ mile broad to the head of Loch Eishort on the opposite side. It thus cuts the parish into two natural divisions, of which the north-eastern, measuring 7⅞ miles in extreme length and 2¼ in extreme breadth, is separated from Strath or the rest of Skye by a lofty hill range. The road from Broadford to Kyle-Rhea crosses this range by the pass of Bealach Udal, 911 feet high, and to the NE

of that pass rise Sgurr na Coinnich (2401 feet) and Beinn na Caillich (2396); to the SW, Ben Alask (1984), Beinn na Seamraig (1839), and Beinn Bhreac (1427). The south-western division forms a peninsula between the Sound of Sleat and Loch EISHORT, and measures 13½ miles in extreme length by 5¼ in extreme breadth. It tapers to a headland, the Point of Sleat, 242 feet high; and elsewhere the coast is generally steep and rocky. The interior is hilly, but hardly mountainous, chief summits from NE to SW being Sgorach Breac (977 feet), Sgurr na h-Iolaire (956), and Sgurr nan Caorach (918). Loch nan Uamh (67 acres) and Loch Dhughaill (50$\frac{7}{10}$ acres) are the largest of fourteen moorland lochs, which sometimes afford fair sport to the fisherman, and which send off a number of streams to the sea. The rocks are mainly metamorphic, but they exhibit great variety, and include quartzite, gneiss, clay slate, limestone, sandstone, etc. The soil of much of the arable land on the SE side is a deep and not unproductive clay. With its larch plantations and trim hedgerows, the long promontory of Sleat has been termed 'the best wooded, the sunniest, and the most carefully cultivated part of Skye;' still, in the Ordnance Area Book, 30,038¼ acres are entered as moorland, leaving less than one-fourth of the entire area for arable, green pasture, or woodland. DUNSCAITH and KNOCK CASTLES, the chief antiquities, are noticed separately, as also is modern ARMADALE CASTLE, whose owner, Lord Macdonald, is sole proprietor. Sleat is in the presbytery of Skye and the synod of Glenelg; the living is worth £198. The new parish church, at Kilmore, 6 miles SSW of Isle-Ornsay, is a good Gothic building of 1877, and contains 600 sittings. There is also a Free church; and six public schools—Aird, Ardvaser, Duisdale, Ferrindonald, Kylerhea, and Tarscabhaig—with respective accommodation for 68, 46, 145, 90, 31, and 80 children, had (1884) an average attendance of 42, „ , 35, 53, 13, and 30, and grants of £36, 4s. 9d., £ „ , £ „ , £58, 17s. 1d., £25, 13s., and £44, 18s. 1d. Valuation (1860) £2751, (1884) £4453. Pop. (1801) 1903, (1831) 2957, (1861) 2330, (1871) 2233, (1881) 2060, of whom 2000 were Gaelic-speaking.

Sleat, Sound of, a belt of sea dividing the SE shore of the Isle of Skye from the Glenelg, Knoydart, and Morar districts of the mainland of Inverness-shire. In the N communicating by KYLE-RHEA with Loch Alsh, it extends 19½ miles south-south-westward; broadens from 1 mile to 7 miles; sends off, on its mainland side, Lochs Hourn and Nevis; on its Skye side contains the harbour of Isle-Ornsay; and is regularly traversed by steamers plying between Oban and the Clyde to the S and Portree and Wester Ross-shire to the N.

Sliach. See DRUMBLADE.

Sligachan, a place, with a good inn, in the Isle of Skye, Inverness-shire, at the head of salt-water Loch Sligachan, 9 miles S by E of Portree and 15½ WNW of Broadford, under which it has a post office. See GLENSLIGACHAN and PORTREE.

Slipperfield Loch. See LINTON, Peeblesshire.

Slitrig Water, a troutful rivulet of Teviotdale, Roxburghshire, formed by several head-streams which rise on the northern slope of the watershed with Liddesdale, and running through or along the borders of Cavers, Kirkton, and Hawick parishes till it falls into the Teviot at the town of Hawick. Its descent is very great; and its current, in consequence, rapid. Over a great part of its course it has a rocky path; occasionally it careers down a shelving descent; and, at one place, it forms a picturesque cataract. Its vale, though gorge-like, and screened by bold green heights, repeatedly expands into little haughs, and is pleasantly tufted with wood; and, so high up as 4 miles above Hawick, is spread out into the rich and beautiful demesne of Stobs Castle. The stream, as a whole, is charmingly picturesque. Dr Leyden, one of several poets who have celebrated it in verse, seems to have been annoyed by the harshness of its name, and capriciously gives it the soft designation of 'Slata.'—*Ord. Sur.*, sh. 17, 1864.

Sloy, Loch. See ARROCHAR.

Smaddy, Loch. See CROSSMICHAEL.

Smailholm, a village and a parish of N Roxburghshire. An ancient straggling place, the village is 5⅝ miles S by E of Gordon station, and 6 WNW of Kelso, under which it has a post office.

The parish is bounded SE by Kelso and Makerstoun, and on all other sides by Berwickshire, viz., SW and W by Mertoun, N by Earlston and Nenthorn, and NE by Nenthorn. Its utmost length, from E to W, is 4 miles; its utmost breadth is 2½ miles; and its area is 4202 acres, of which 7¾ are water. Troutful EDEN WATER winds 3 miles east-by-southward along the eastern part of the northern boundary; and beside it, in the north-eastern corner of the parish, the surface sinks to 298 feet above sea-level, thence rising to 570 feet near Overtown, 658 near New Smailholm, and 680 at Sandyknowe Crags. Trap rock, 'rotten rock,' and limestone are plentiful; and the two first furnish very fair road metal. Some 65 acres are under wood; about one-ninth of the entire area is natural pasture; and all the remainder is in tillage. Sandyknowe, a comfortable and substantial farm, 1½ mile SSW of the village and 6 miles W by N of Kelso, was the frequent home, from his third till his eighth year, of Sir Walter Scott (1771-1832), whose paternal grandfather, Robert Scott, held a lease of it from his chief and kinsman, Mr Scott of Harden. Behind, on Sandyknowe Crags, 'standing stark and upright as a warder, is the stout old Smailholm Tower, seen and seeing all around. It now is more than a hundred years since that "lonely infant" was found in a thunderstorm, lying on the soft grass at the foot of the grey old Strength, clapping his hands at each flash, and shouting, "Bonny! bonny!"' Thus wrote the author of *Rab and his Friends;* and Scott himself, in the Introduction to Canto Third of *Marmion,* has sung—

'Those crags, that mountain tower,
Which charmed my fancy's wakening hour:
Though no broad river swept along,
To claim, perchance, heroic song;
Though sighed no groves in summer gale,
To prompt of love a softer tale;
Though scarce a puny streamlet's speed
Claimed homage from a shepherd's reed,
Yet was poetic impulse given,
By the green hill and clear blue heaven.
It was a barren scene, and wild,
Where naked cliffs were rudely piled;
But ever and anon between
Lay velvet tufts of loveliest green;
And well the lonely infant knew
Recesses where the wall-flower grew,
And honey-suckle loved to crawl
Up the low crag and ruined wall.
I deemed such nooks the sweetest shade
The sun in all his round surveyed;
And still I thought that shattered tower
The mightiest work of human power;
And marvelled, as the aged hind
With some strange tale bewitched the mind
Of forayers, who, with headlong force,
Down from that strength had spurred their horse
Their southern rapine to renew,
Far in the distant Cheviots blue,
And, home returning, filled the hall
With revel, wassel-rout, and brawl.—
Methought that still with tramp and clang
The gateway's broken arches rang;
Methought grim features, seamed with scars,
Glared through the windows' rusty bars.'

In the *Eve of St John,* too, almost his earliest ballad, the scene is laid at Smaylho'me or Smailholm Tower, which later formed his prototype of 'Avenel Castle.' Built in the early part of the 15th century, it is a plain square gabled tower of the usual Border type, three stories high, with massive walls 9 feet thick, small windows, vaulted stone roofs, and a narrow stone turnpike stair at the SE angle. On three sides are crags, on the fourth or eastern a morass and a deep brown lochlet, the remains of a larger lake that once surrounded the height. A strong outer wall, now very ruinous, enclosed a courtyard, within which stood the domestic chapel. From the top is gained a magnificent view to Berwick, the Cheviots, 'triple Eildon,' and the Lammermuirs; and at such a distance is the tower visible that in old topographical works it figures as 'a

conspicuous landmark to direct vessels to Berwick.' The lands of Smailholm were held by the Pringles from 1408 until the first quarter of the 17th century, when they went to the Scotts of HARDEN, so that their present owner is Lord Polwarth. The Earl of Haddington is chief proprietor in the eastern half of the parish; and two lesser landowners hold each an annual value of between £100 and £500, and 2 of from £20 to £100. Smailholm is in the presbytery of Earlston and the synod of Merse and Teviotdale; the living is worth £370. The ivy-mantled church, supposed to have been built in 1632, contains 282 sittings. The public school, with accommodation for 122 children, had (1884) an average attendance of 76, and a grant of £57, 13s. Valuation (1864) £5492, 3s. 11d., (1884) £5785, 2s. Pop. (1801) 446, (1831) 628, (1861) 554, (1871) 534, (1881) 446.—*Ord. Sur.*, sh. 25, 1865.

Small or **Sma' Glen.** See GLENALMOND.

Smallholm. See LOCHMABEN.

Small Isles, a Hebridean parish of Argyll and Inverness shires, detached from Sleat parish in 1726, and successively known as Eigg, Short Isles, and Small Isles. Besides a few uninhabited islets, it comprises the islands of Canna, Muck, Rum, Sanday, and Eigg, the first four belonging to Argyllshire, the fifth to Inverness-shire, and all described in separate articles. Its total area is 62⅔ square miles or 39,945⅔ acres, of which 32,039½ belong to Argyll and 7906¼ to Inverness shire, whilst 2008½ are foreshore and 184½ water. The post-town is Oban. Small Isles parish is in the presbytery of Skye and the synod of Glenelg; the living is worth £208. Two public schools, Canna and Eigg, with respective accommodation for 25 and 60 children, had (1884) an average attendance of 17 and 24, and grants of £30, 16s. 1d. and £50, 5s. 3d. Valuation (1884) £3678, of which £2659 was for the Argyllshire islands. Pop. (1811) 1547, (1831) 1005, (1861) 567, (1871) 522, (1881) 550, of whom 482 were Gaelic-speaking, and 291 were in Eigg.

Smeaton, a mansion of 1790, in Prestonkirk parish, Haddingtonshire, 1½ mile N of East Linton. It is interesting as containing several relics of Mary Queen of Scots—viz., an autograph letter, an altar cloth of her embroidering, a comb, a black satin body, etc. In 1538 Sir Patrick Hepburn of Wauchton gave half the lands of Smeaton and all Smeaton-Crux to his second son, Adam, whose last male descendant was succeeded in 1764 by his nephew, George Buchan of LETHAM. He was created a baronet in 1815; and his grandson, Sir Thomas Buchan Hepburn, third Bart. (b. 1804; suc. 1833), holds 2772 acres in the shire, valued at £8513 per annum.—*Ord. Sur.*, sh. 33, 1863. See J. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Smeaton, a railway station on the S border of Inveresk parish, Edinburghshire, on the Macmerry railway, 4 miles SE of Portobello.

Smithston. See GREENOCK.

Smithstone, an estate, with a mansion, in Tarbolton parish, Ayrshire, 1¾ mile WSW of Mauchline.

Smithton, a village in Cumbernauld parish, Dumbartonshire, near the Edinburgh and Glasgow railway, 2½ miles WSW of Cumbernauld town. Pop. (1871) 446, (1881) 420.

Smoo Cave, a limestone cavern, with three compartments, in Durness parish, Sutherland, at the head of a small sea-inlet 1¾ mile E of Durness church. Its entrance is 53 feet high, and resembles a Gothic arch with high entablature and spreading pillars; its first compartment is 200 feet long and 110 wide, and has a vaulted roof with vertical aperture to the open air; its second compartment is 70 feet long and 30 wide, has also a high arched roof with vertical aperture, contains a deep pool, and receives a waterfall of 80 feet in leap; and the third compartment is 120 feet long, 8 wide, and from 12 to 40 high, and cannot be seen without an artificial light. A small harbour is adjacent to the cavern, but serves only for boats.—*Ord. Sur.*, sh. 114, 1880.

Smyllum. See LANARK.

Snaigow, a modern English Baronial mansion in Caputh parish, Perthshire, 4 miles E by N of Dunkeld. The estate was purchased in 1874, and has since been greatly improved, by William Cox, Esq., a partner in the great LOCHEE firm.—*Ord. Sur.*, sh. 48, 1868.

Snar Water. See CRAWFORDJOHN.

Snizort, a parish in the N of Skye, Inverness-shire, whose church stands towards the head of Loch Snizort Beag, 6⅜ miles NNW of Portree, under which there is a post office of Snizort. Containing also the post office villages of Skeabost and Uig, it is bounded N by Kilmuir, E by the Sound of Raasay, SE by Portree, SW by Bracadale, and W by Duirinish and Loch Snizort. Its utmost length, from N to S, is 15 miles; its utmost width, from E to W, is 8¼ miles; and its area is 84⅘ square miles or 54,285⅝ acres, of which 789⅓ are foreshore, 177⅝ water, and 38½ tidal water. The E coast measures 5¾ miles, and the W coast no less than 23, following all the ins and outs of Uig Bay and Loch Snizort Beag; and both are generally bold and rocky. Loch Leathan (7 × 4 furl.; 436 feet), on the Portree boundary, is much the largest of four fresh-water lakes; and the principal streams are the Snizort, the Haultin, the Romesdal, the Hinnisdal, and the Conon, all running to Loch Snizort Beag or Loch Snizort. The surface is everywhere hilly or mountainous, chief elevations from N to S being Biodha Buidhe (1523 feet), Beinn Edra (2003), Baca Ruadh (2091), the Storr (2360), Beinn a Chearcaill (1817), and Beinn Grasco (768). Of these the huge and lofty ridge that bears the name of the Storr sends up a chief cluster of torn and precipitous summits, which, rising to a height of several hundred feet above the adjacent masses, shoot up from the bosom of a fog like a series of air-borne spires, towers, and walls—a far-away city on the clouds. Much of the parish is irreclaimable waste, 47,439 acres being ranked as moorland by the Ordnance Survey; but much of this moorland is occupied in the rearing of black cattle. The rocks are principally traps, partly overlying stratified formations; and the soil of the arable grounds, though various, is principally a gravelly loam on a cold clay. On an islet formed by the river Snizort, and now used as a cemetery, are the ruins of an old cruciform church, which probably was once the parent church of Skye. In various localities are cairns, tumuli, and vestiges of stone-circles. The Old Man of Storr is a natural obelisk of uncommon magnitude, measuring 360 feet around the base, swelling below the middle to a larger girth, and thence tapering away to nearly a sharp point at an altitude of 160 feet. On the boundary with Portree is a beautiful cascade over a precipice about 90 feet high. Beneath it, and nearly opposite its middle, an arched hollow path passes across the rock, so broad that five or six persons may occupy it abreast, and so situated that they are secure from the body of water which rolls over them, and looks like a thick curved pillar of smoke. Kingsburgh House, near the E shore of Loch Snizort Beag, 2¾ miles NNW of the parish church, is gone; but some venerable plane trees mark the site of its garden. Hither, disguised as 'Betty Burke,' Miss Flora Macdonald's muckle Irish maid, came Prince Charles Edward, on 28 June 1746; here he made a hearty supper, drank a bumper of brandy, smoked a pipe, and enjoyed, for the first time for many weeks, the luxury of a good bed. Hither, too, in 1773, came Dr Johnson. 'To see,' says Boswell, 'Dr Samuel Johnson in Prince Charles's bed, in the Isle of Skye, in the house of Miss Flora Macdonald, struck me with such a group of ideas as it is not easy for words to describe. He smiled and said, "I have had no ambitious thoughts in it."' Lord Macdonald is chief proprietor, but 4 others hold each an annual value of more than £500. Snizort is in the presbytery of Skye and the synod of Glenelg; the living is worth £158. The parish church, built in 1805, and enlarged in 1839, contains 750 sittings. There is a Free church of Snizort; and five schools—Bernisdale, Glenhinnisdal, Kensaleyre, Uig, and the Macdiarmid foundation—with respective accommodation for 120, 33, 60, 134, and 64 children, had (1884) an average attend-

ance of 90, 14, 28, 49, and 36, and grants of £35, 4s. 6d., £9, 15s., £18, 7s. 6d., £32, 14s. 6d., and £16, 3s. 5d. Valuation (1860) £4187, (1884) £5418. Pop. (1801) 2144, (1831) 3487, (1861) 2639, (1871) 2326, (1881) 2120, of whom 2055 were Gaelic-speaking, and 17 were in Stenscholl *quoad sacra* parish.

Snizort, Loch, a sea-loch in the NW of Skye, entering from the Little Minch between the promontories of Trotternish and Vaternish. Striking 8½ miles south-south-eastward, and narrowing from 9 miles at the entrance to 3¾ miles, it embosoms the Ascrib Islands, sends off Uig Bay to the E, and forks at its head into Lochs Greshernish and Snizort Beag. Of these Loch Greshernish extends 3¾ miles south-south-westward, and varies in width between 1¼ and ¼ mile; whilst Loch Snizort Beag, winding 6¼ miles south-south-eastward, is nowhere more than a mile across.

Soay, an island of Bracadale parish, Skye, Inverness-shire, lying SW of Loch Scavaig, and S of Minginish, from which it is separated by a strait, called Soay Sound, 5¾ furlongs to 1⅜ mile wide. The island is 3 miles long from NE to SW, and 1⅞ mile in extreme breadth; but it is nearly bisected by two bays, indenting it on opposite sides. Its surface is low and broken, and nowhere rises to an elevation of more than 455 feet; and its coast is bold and rocky, and generally presents to the surge perpendicular cliffs of 60 or 70 feet in height. Its rocks present an alternation of red sandstone and greywacke traversed by trap. Pop. (1841) 113, (1861) 129, (1871) 120, (1881) 102.

Soay. See SOYEA.

Solway Firth (the *Itunæ Aestuarium* of Ptolemy), a projection of the Irish Sea north-eastward between Scotland and England. Its entrance on the English side is obviously at St Bees Head in Cumberland; but, on the Scottish side, is far from being distinctly marked, and has been very variously stated. Burrow Head, at the southern extremity of the district of Machars in Wigtownshire, is the furthest and the most commonly assigned entrance; yet between that headland and Balmae Head or even Balcarry Point, respectively 15¾ and 25 miles in a straight line east-north-eastward, the whole Scottish coast directly confronts the entire expanse of the Irish Sea. Starting from Burrow Head, the firth measures 32½ miles across the entrance, and 49 miles in length; but measured from Balcarry Point, it is only 22 miles across the entrance, and 36½ miles in length. From Balcarry Point to the mouth of Pow Water in Cummertrees, it extends nearly due north-eastward, and gradually contracting in width, though with occasional expansions, has a maximum breadth of 18¼ miles, a minimum breadth of 7, and a mean breadth of 13. From the mouth of Pow Water to its head—a distance of 13½ miles—it extends in an easterly direction, and has a varying breadth of from 1½ mile to 8½ miles—the maximum being at Morecambe Bay, and the minimum near the Solway Viaduct. The streams, bays, and coasts of the firth on the English side do not come within our scope. The Sark, Kirtle Water, and some smaller streams enter it on the Dumfriesshire coast, without forming estuaries; the Annan, Pow Water, and Lochar Water enter it on the same coast through estuaries of but small extent; and the Nith, before entering it, forms a long and gradually expanding estuary between Dumfriesshire and Galloway. The chief streams which enter it in Galloway, calculating to the extreme point of Burrow Head, are Southwick Water, Urr Water, the Dee, the Fleet, the Cree, and the Bladenoch; and its principal marine expansions within the same range of seaboard are the estuary of the Urr, Auchencairn Bay, Kirkcudbright Bay, Fleet Bay, and, chief of all, Wigtown Bay. The coast along Dumfriesshire is low and sandy, and ascends by an exceedingly low gradient from the line of high-water mark; but along the greater part of Galloway it is bold and rocky, and exhibits cliffs, caverns, pinnacles, isolated rocks, and a variegated rampart in such frequent and curious combinations as to produce abundance of picturesque scenery.

The Solway, as to the depth of its water, the character of its beach, and especially the phenomena of its tides, differs widely from every other firth in Scotland, or even from every other marine indentation in the world. Over a distance of about 20 miles from its head, the whole of its bed, excepting the narrow and canal-like channels of the Nith and the confluent waters which enter near the eastern extremity, is alternately a surgy brown sea, tinctured with silt, and oscillating with the tide, and a naked, flat, unrelieved expanse of sand, a wilderness of desolation, a miniature Sahara, strangely interposing its dark dreary projection between the blooming slopes of Cumberland and the fertile lands of Scotland. Much of its beach, or rather of its bed, even in its broader and more seaward parts, is of the same character; so very much, indeed, that were the firth estimated only by the space it covers at low water, it would figure in comparative insignificance. All its tides are rapid, and constitute rather a rush or careering race than a flow or a current of waters. A spring tide, but especially a tide which runs before a stiff breeze from the S or the SW, careers along at the rate of from 8 to 10 miles an hour. It is heard by the people along the shore more than 20 miles before it reaches them, and approaches with a hoarse loud roar, with a tumult far more sublime than if the wide sandy waste were scoured by the fleetest host of invading cavalry. Before the first wave can be descried from the shore, a long cloud of spray is seen, as if whirling on an axis, zoned with mimic rainbows, sweeping onward with the speed of a strong steady breeze; then follows a long curved white and flowing surf; and then suddenly appears the majestic van of the tide, a deeply dimpled body of waters, from 3 to 6 feet high, rolling impetuously forward, and bringing closely in its rear a tumbling mass of sea, glittering and gorgeous all over with the most fitful play of the prismatic colours. Accidents occasionally occur with ships, and have been very frequent—though much less so of late years than before—with persons venturing within high-water mark. The rivers which traverse the bed of the firth being easily fordable, strong inducement is offered by the shortness of the path to cross the sands to England during the recess of the tide. But Scotchmen, even when well-mounted, have, in numerous instances—sometimes to an amount to constitute a literal catastrophe—been overtaken and drowned, while returning from the Cumberland fairs. Even persons best acquainted with the locality are liable to mistake in their calculations of the time when the tide will approach; and, when they are halfway across, may hear the appalling sound of the watery invasion so near and menacing, that a clear atmosphere, a good steed, much self-collectedness, and a steady remembrance of the direction of the path, may all be necessary for their preservation. Dense fogs frequently arise, and so bewilder experienced guides, that they can proceed in safety only with the aid of the compass; and quicksands are occasionally formed, and fitfully shift their localities, to the imminent peril of every intruder who has not watched the impressions made upon the ground by almost every successive tide.

The fisheries of the Solway are extensive and various. Some curious particulars respecting their former condition are furnished in Scott's novel of *Redgauntlet.* The mode of fishing is principally by stake-nets, which are wholly submerged by the tide, and which, when the tide is out, contribute their lank proportions to the prevailing dreariness of the landscape. Salmon, herling, sea-trout, flounders, and codlings are taken in large quantities; turbot and soles occur, but are not plentiful; herrings, at a former period, were in some seasons caught and cured in great abundance, but of late they appear but occasionally, and not in large numbers; and mussels and cockles are gathered along the shores by poor persons, and carried weekly to the markets of Dumfries and Carlisle. The fishings usually commence early in March, and close before the end of September.

The Solway, in spite of the singular character of its tides, and in spite of the opening of railways, is still of value to Dumfriesshire and Kirkcudbrightshire for its navigation; much more so, in proportion, than it is to Cumberland. Not only the seaboard, but most of the interior of the counties, is far distant from Scottish coal of any sort, and especially from coal of good quality, so is largely dependent on Workington, Whitehaven, and other places near the mouth of the English side of the Solway, for supplies of fuel. The amount of tonnage in vessels employed in importing coals is, in consequence, aggregately great. The export trade, too, of the two counties, or the outlet for the produce of their arable farms, their grazing-grounds, their sheep-walks, their dairies, and their poultry yards, is mainly with Liverpool and other English towns on the western coast, and is largely carried on by the navigation of the Solway. Ordinary tides rise about 10 or 12 feet, and spring tides about 20; and they bring enough of water up to the very head of the firth to let vessels of 120 tons move up the channel of the stream to the foot of the river Sark. The Solway has long been gradually receding from the land; it once filled the large area now occupied by Lochar Moss, and covered less than a century ago lands which are now verdant or arable 1 mile distant from its present high-water mark. The Solway Railway Viaduct, described under ANNAN, has been reconstructed, and was reopened to traffic in 1884.

Sonachan House, a mansion in Kilchrenan parish, Argyllshire, on the SE shore of Loch Awe, 12 miles N by W of Inveraray.

Sorbie, a village and a coast parish of SE Wigtownshire. The village stands 2⅝ miles W of Garliestown and ½ mile S by E of Sorbie station on the Wigtownshire railway (1875-77), this being 6 miles N by W of Whithorn and 6¼ S of Wigtown. It has a post and railway telegraph office, a neat little Free church, with belfried gable to the street, and a handsome school, erected in 1875-76 at a cost of more than £1000; but its damask factory, established about 1790, and long famous through many parts of Britain for the quality of its goods, is now a thing of the past.

The parish, containing also the seaport village of GARLIESTOWN, consisted anciently of two divisions, Great and Little Sourbie, each with a church; and now comprises the ancient parishes of Sourbie, CRUGGLETON, and KIRKMADRINE, united about the middle of the 17th century. It is bounded N by Kirkinner, NE and E by Wigtown Bay, S by Whithorn, and SW by Glasserton. Its utmost length, from E by N to W by S, is 6 miles; its utmost breadth is 5⅝ miles; and its area is 11,366¼ acres, of which 1608¼ are foreshore and 147 water.* The coast, with a total extent of 10⅝ miles, is low and flat on the NE, fringed by the broad expanse of the BALDOON Sands; but on the E is rocky and precipitous, in places rising to over 100 feet, and pierced near Palmallet Point by two curious caves, the larger of which is 120 feet long, 100 high, and 36 wide. The chief indentations are GARLIESTOWN BAY and Rigg or Cruggleton Bay, which are flanked on the N by EAGERNESS Point, on the S by Sliddery or Cruggleton Point. The interior, attaining a maximum altitude of 225 feet at the Gallow Hill, is prettily diversified with gentle eminences and fertile vales; and from several standpoints one gains a superb prospect of the Irish Sea, the Solway Firth, and their far-away mountain screens. One of the vales runs eastward through the centre of the parish, from the bed of Dowalton Loch to the head of Garliestown Bay. The rocks are chiefly Silurian; and the soil, a heavy clay in some of the vales, is elsewhere mostly of dry brownish earth mixed more or less with till or gravel. Nearly 500 acres are under wood; about 730 are pastoral or waste; and all the rest of the land is in tillage. The old Tower or Place of Sorbie, 1 mile to the E of the village, is a mass of ruin 60 feet high, which forms two sides of a quadrangle, and has been four stories high. It has lost its pepperbox turrets; and the fine old trees, which, till lately, surrounded it, have nearly all been felled. From the beginning of the 16th till the latter part of the 17th century, it was the seat of the Hannays, one of whom, Patrick, served the 'Winter King' in the Thirty Years' War, and published a very scarce volume of Poems (1622). Another minor poet, Robert Cowper, M.D. (1750-1818), was born at Balsier Farm. The antiquities of CRUGGLETON, EAGERNESS, and KIRKMADRINE are noticed separately, as also is GALLOWAY HOUSE, whose owner, the Earl of Galloway, is chief proprietor, 2 others holding each an annual value of more than £500, and 2 of between £100 and £500. Sorbie is in the presbytery of Wigtown and the synod of Galloway; the living is worth £292. The new parish church, successor to one at Sorbie village, is situate at Millisle, 1½ mile WNW of Garliestown. Built in 1874-76 at a cost of £2500, it is a cruciform Early English edifice, with 450 sittings, a SW tower and spire over 60 feet high, and a stained E window in memory of the late Earl of Galloway. Two public schools, Garliestown and Sorbie, with respective accommodation for 171 and 160 children, had (1884) an average attendance of 132 and 113, and grants of £140, 8s. and £101, 8s. Valuation (1860) £11,307, (1885) £15,648, 7s. 7d. Pop. (1801) 1091, (1831) 1412, (1861) 1814, (1871) 1667, (1881) 1696.—*Ord. Sur.*, shs. 4, 2, 1857-56.

Sorn, a village and a parish in the NE of Kyle district, Ayrshire. The village stands on the right bank of the river Ayr, 2½ miles ENE of Catrine, and 4¾ E of Mauchline, under which it has a post office. Pop. (1861) 363, (1871) 393, (1881) 354.

The parish, containing also the town of CATRINE, was disjoined from Mauchline in 1692, and bore for some time the name of Dalgain. It is bounded N by Galston, NE by Avondale in Lanarkshire, E by Muirkirk, S by Auchinleck, and W by Mauchline. Its utmost length, from E to W, is 6¾ miles; its utmost breadth, from N to S, is 6½ miles; and its area is 30⅛ square miles or 19,314 acres, of which 116½ are water, and 11 lie detached. The river AYR, flowing between steep, bold, copse-clad banks, has here a west-by-southerly course of 9¾ miles—for the first 3¾ furlongs along the Muirkirk, and for the last 7½ along the Mauchline, boundary. CLEUGH Burn runs 4 miles south-westward to the Ayr between Sorn Castle and the parish church, and makes several romantic waterfalls; whilst CESSNOCK Water, rising on Auchmannoch Muir, runs 4⅞ miles south-westward, till it passes off into Mauchline on its way to the river Irvine. The surface sinks in the extreme SW to 297 feet above sea-level; and thence it rises to 657 feet at Roundshaw, 694 at AIRDS MOSS, 557 near Sorn Mains, 887 at Burn o' need Rigg, 964 at AUCHMANNOCH Muir, 961 at Tincornhill, 1342 at Blackside, and 1340 at Auchinlongford Hill. Of these, Blackside commands a magnificent view over Ayr and Lanark shires, and parts, it is said, of 14 other counties. Coal, ironstone, and limestone have all been worked; sandstone is plentiful; and fine specimens of calc-tuff are found in the Cleugh Burn glen. The soil of the haughs is a gravelly loam; on many of the arable slopes and braes is a reddish clay; and, on the skirts and shoulders of the hills, is a mossy earth or moss itself, sometimes incumbent on clay. Nearly one-sixth of the entire area is regularly in tillage; rather more than 600 acres are under wood; and the rest of the parish is meadow, coarse hill pasture, or moss. Sorn Castle, 1⅜ mile NE of Catrine, is charmingly situated on a lofty and well-wooded rocky terrace overlooking the river Ayr. The building is of very high but unknown antiquity. About the year 1406 it became, along with the manor of Sorn and other lands in Kyle, the property of Andrew Hamilton, third son of Sir David Hamilton of Cadzow, ancestor of the Duke of Hamilton; and, in subsequent times, it passed by marriage to the Earls of Winton, and by purchase to the Earls of Loudoun. Margaret Dalrymple, Dowager-Countess of Loudoun

* According to the Ordnance Survey, but this water-area has been almost reduced to *nil* by the draining in 1862-63 of DOWALTON LOCH, at the meeting-point of Sorbie, Kirkinner, and Glasserton parishes.

(1678-1777), lived and died in it, attended by servants nearly as old as herself. Under the persecutions of Charles II., the castle was taken possession of as a fortalice of the royal forces, and made the seat of a garrison for overawing the Covenanters.* Purchased by his family towards the close of last century, it now is the seat of James Somervell, Esq. (b. 1845 ; suc. 1881), who holds 6245 acres in the shire, valued at £3787 per annum. CATRINE HOUSE, noticed separately, has memories of Dugald Stewart and his father. The 'prophet,' Alexander Peden (1626-86), was born and died in the parish. Exhausted with his prolonged toils and sufferings in traversing the kingdom as a proscribed minister, and believing death to be near, he returned to his brother's house in Sorn to die; but he was there in the immediate vicinity of the garrison posted in Sorn Castle, so lived chiefly in an artificial cave,—uniformly protected, as he had been in a hundred places before, from the peering searches of the blood-thirsty soldiery. He was visited on his death-bed by the celebrated James Renwick. (See CUMNOCK.) Another native was Joseph Train (1779-1852), poet and antiquary. Ten proprietors hold each an annual value of £500 and upwards, and 8 of between £100 and £500. In 1871 the *quoad sacra* parish of CATRINE was disjoined from Sorn, which itself is a parish in the presbytery of Ayr and the synod of Glasgow and Ayr. The living is worth £310. The parish church, ¼ mile W by N of Sorn village, was built in 1658, and, as enlarged in 1826, contains 611 sittings. Three public schools—Catrine, Sorn, and Woodside—with respective accommodation for 315, 208, and 207 children, had (1884) an average attendance of 276, 136, and 116, and grants of £223, 4s., £119, 17s., and £112, 14s. Valuation (1860) £13,140, (1885) £21,105, *plus* £986 for railway. Pop. (1801) 2606, (1831) 4253, (1861) 4042, (1871) 4032, (1881) 4255, of whom 1617 were in Sorn ecclesiastical parish. —*Ord. Sur.*, shs. 14, 22, 15, 23, 1863-65.

Soulseat. See SAULSEAT.

South Alloa, etc. See ALLOA, SOUTH, etc.

Southannan, an estate in the N of West Kilbride parish, Ayrshire, 4 miles S of Largs. It belonged for centuries to the Lords Sempill, and belongs now to the Earl of Eglinton; is traversed by a romantic burn, making a series of beautiful falls ; and gives name to a long reach of foreshore sands, of half-moon form, sheltered by a curving recess in the land, which, when the tide is out, have a maximum breadth of 1⅛ mile, and are notable for beds of shell-fish and flocks of wild-fowl. A ruined mansion on the estate, near a fine cascade of the burn, was built in the time of James VI. by one of the Lords Sempill after an Italian model.—*Ord. Sur.*, sh. 21, 1870.

Southbarr. See INCHINNAN.

Southdean, a large Border parish of SE Roxburghshire, containing Chesters hamlet, near the left bank of Jed Water, 7 miles SSW of Jedburgh and 9 ESE of Hawick, under which there is a post office of Southdean. Comprising since 1777 one-half of the ancient parish of ABBOTRULE, it is bounded NW and NE by Jedburgh, E by Oxnam and the two detached portions of Jedburgh, SE by Northumberland, SW by Castleton, and W by Hobkirk. Its utmost length, from N by E to S by W, is 10½ miles ; its utmost width is 7½ miles ; and its area is 43⅝ square miles or 27,983⅝ acres, of which 55 are water. JED WATER, rising, as Raven Burn, at an altitude of 1500 feet, on the western slope of Carlin Tooth, within ⅝ mile of a head-stream of the English TYNE, has here a north-north-easterly course of 15 miles —over the first 9 through the interior, and then along the Jedburgh and Oxnam boundaries—until, just above Fernieherst, it passes off from this parish, whose western border is drained by head-streams or early affluents of RULE WATER. In the extreme N the surface sinks along the Jed to close on 400 feet above the sea ; and chief elevations, from N to S, are Faw Hill (1086 feet), Mervins Law (836), Belling Hill (1162), Wolflee Hill (1288), CARTER FELL (1899), and Carlin Tooth (1801), summits of the CHEVIOTS these, which separate Tynedale and Liddesdale from Southdean, itself a portion of Teviotdale. The southern district is boldly hilly ; and the northern also contains much upland pasture, yet is softer in feature than the southern district, and comprises a considerable extent of arable land. About 500 acres are under wood, and about 3000 in tillage. The soil of the arable lands is variously gravel, light black earth, and strong clay. Excellent red and white sandstone has been worked in several quarries ; limestone is inexhaustible ; coal has been vainly sought for ; and antimony occurs, but not in such quantity as to be profitably worked. British camps and Border peel-houses exist in such number as to show how stirring and blood-stained an arena the parish must have been of early wars and marauding. Close to the English Border, 5¾ miles ESE of Chesters, is the scene of the 'Raid of the Redeswire,' 7 July 1575, when some Scots, resenting the slaughter of one of their countrymen, made a vengeful attack on the offenders, and were repulsed. But meeting in their flight a body of the men of Jedburgh, who joined them, they wheeled round on their pursuers, completely routed them, killed Sir George Heron, an eminent Northumbrian, and carried prisoners to Dalkeith, Sir John Forster, the warden, and some considerable persons, his attendants. (See JEDBURGH.) James Thomson (1700-48) was the son of a former minister, who removed here from Ednam a few weeks after the poet's birth, and whose monument in the churchyard was renewed in 1866. Thus most of the impressions which formed his characteristic style of poetry were gained from Southdean and its neighbourhood. The Rev. Mr Veitch and Mr Bryson found among the Southdean hills a retreat from persecution. Mr James Davidson, who had terriers called Pepper and Mustard, and was an enthusiastic lover of field-sports, occupied the farm of Hyndlee, 2½ miles N of the mountain pass into Liddesdale called 'Note o' the Gate,' and 10 SE of Hawick. He is believed, in the district, to have been the original of Sir Walter Scott's 'Dandie Dinmont' in *Guy Mannering*. Mansions are WOLFLEE, ABBOTRULE, and GLENDOUGLAS ; and 3 proprietors hold each an annual value of more, 2 of less, than £500. Giving off a portion to Edgerston *quoad sacra* parish, Southdean is in the presbytery of Jedburgh and the synod of Merse and Teviotdale ; the living is worth £450. The old church stands in ruins on the right bank of Jed Water, 1¼ mile S by E of Chesters. The present parish church, at Chesters, successor to one of 1690, was built in 1876, and is a tasteful Early English edifice, one of whose stained windows is a memorial to the poet Thomson. The public school, with accommodation for 111 children, had (1884) an average attendance of 51, and a grant of £53, 14s. 6d. Valuation (1864) £8922, 3s. 3d., (1884) £10,777, 1s. 10d. Pop. (1801) 697, (1841) 868, (1861) 759, (1871) 753, (1881) 724, of whom 641 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 17, 1864.

Southend, a village and a parish at the southern extremity of the peninsula of Kintyre, Argyllshire. The village stands 9½ miles S by W of Campbeltown, under which it has a post and telegraph office.

The parish, comprising the ancient parishes of Kilcolmkill and Kilblane, includes the island of SANDA and the adjacent islets, and has been called Southend since the Reformation. It is bounded N by the parish of Campbeltown, and on all other sides by the sea. Its utmost length, from E to W, is 10¾ miles ; its breadth,

* Sir William Hamilton, whose daughter and heiress married George Lord Seton, and carried the property to the Earls of Winton, was one of the senators of the College of Justice, and lord-treasurer to James V. On the eve of the daughter's marriage, the king set out to honour the bridal with his presence ; but he had to traverse a long and dreary tract of moor, moss, and miry clay, where there was neither road nor bridge ; and, when about half-way from Glasgow, he rode his horse into a quagmire, and was with difficulty extricated from his perilous seat on the saddle. Far from a house, exposed to the bleak wind of a cold day, and environed on all sides by a cheerless moor, he was compelled to take a cold refreshment by the side of a well, and at length declared that 'were he to play a trick on the devil, he would send him to a bridal at Sorn in the middle of winter.' The well at which he sat is still called the King's Well ; and the quagmire into which his horse went is known as the King's Stable.

from N to S, varies between 2⅞ and 6⅛ miles; and its area is 31,160 acres, of which 277½ are foreshore and 81½ water. The coast, 20½ miles in extent, is slightly indented by three or four little baylets capable of affording anchorage to vessels, and terminates on the SW in the bold broad promontory of the Mull of Kintyre. It is chiefly sandy in the E, but high, bold, and very rocky in the W, and in its high bold parts abounds with caves, and presents a striking appearance as seen from the sea. The interior exhibits a picturesque variety of heights and hollows, pastoral hills and arable vales, low grounds and heathy eminences. Chief elevations, from E to W, are Kerran Hill (775 feet), Tod Hill (610), Cnoc Mor (399), *Cnoc Odhar (907), Beinn na Lice (1405), and *Cnoc Moy (1462), where asterisks mark those summits that culminate on the northern border. The last, Cnoc Moy, commands a magnificent panoramic view. Two brooks, Conieglen Water and the Breackerie Water, which drain the surface southward to the sea, are subject to sudden inundating freshets, and sometimes cut out for themselves reaches of new channel. Mica slate, trap, Old Red Sandstone, and limestone are the principal rocks; and the trap has been quarried for masonry, the limestone worked for manure. The soil on the eastern seaboard is a light loam mixed with sand or gravel; that on the slopes of the hills is mostly a light gravel incumbent on till. The proportion of arable land to pasture is nearly as 1 to 15. Antiquities, other than that noticed under Dunaverty Castle, are remains of Scandinavian forts, some ancient standing-stones, and ruins or vestiges of three pre-Reformation chapels. Mansions, noticed separately, are Carskey and Keir; and the Duke of Argyll owns nearly five-sixths of the entire rental, 2 others holding each an annual value of more, and 2 of less, than £500. Southend is in the presbytery of Kintyre and the synod of Argyll; the living is worth £232. The parish church was built in 1774, and contains 600 sittings. A U.P. church, originally Relief, was built in 1798. Two public schools, Glenbreackerie and Southend, with respective accommodation for 45 and 161 children, had (1884) an average attendance of 35 and 72, and grants of £29, 11s. 6d. and £63, 13s. Valuation (1860) £10,291, (1885) £14,010, 8s. Pop. (1801) 1825, (1831) 2120, (1861) 1214, (1871) 1044, (1881) 955, of whom 121 were Gaelic-speaking.—*Ord. Sur.*, sh. 12, 1872.

Southerness, a village in Kirkbean parish, SE Kirkcudbrightshire, at Southerness Point, on the Solway Firth, 10 miles SE of Dalbeattie, and 16 S of Dumfries. It was built some time after the middle of last century by Oswald of Auchencruive near Ayr, in the expectation of its becoming a mining-village and depôt for coal; but the desired mineral having been vainly searched for in the neighbourhood, the village became transmuted into a sea-bathing retreat. Southerness Point screens the W side of the entrance of the estuary of the Nith, and is crowned by a disused lighthouse.—*Ord. Sur.*, sh. 6, 1863.

South Esk, etc. See Esk, South, etc.

Southfield, a village in Dalry parish, Ayrshire, 1⅝ mile NE of the town. Pop. (1871) 369, (1881) 374.

Southfield, a village in Slamannan parish, Stirlingshire, 5 furlongs W of Binniehill, and 1 mile W by S of Slamannan station.

South Hall, a mansion in Inverchaolain parish, Argyllshire, on a picturesque reach of the Kyles of Bute, 5 miles NNW of Rothesay. Its owner, Lieut.-Col. Duncan Campbell (b. 1814; suc. 1864), holds 19,736 acres in the shire, valued at £2245 per annum.—*Ord. Sur.*, sh. 29, 1873.

Southwick. See Colvend.

Soutra, an ancient parish on the SW border of Haddingtonshire, annexed since 1589 to the contiguous parish of Fala in Edinburghshire. The hospital and church of 'Soltre' stood near the top of Soutra Hill (1209 feet), 5¾ miles SE of Pathhead, 6 E by S of Tynehead station (only 3⅝ as the crow flies), and 16¾ SE of Edinburgh. The hospital was founded by Malcolm IV., in or a little before 1164, for pilgrims, travellers, and poor folk, and was dedicated to the Holy Trinity. Mary of Gueldres annexed its lands to Trinity College, Edinburgh, in 1462; and after the Reformation its church ceased to be maintained as a distinct parochial charge, and the buildings fell into ruin. About 1850 every vestige of wall and foundations was dug up and carted away for building dykes and farm steadings, with the exception of a small aisle, which in 1686 had been appropriated as a burial vault by the Pringles of Beatman's Acre. Soutra Hill is the most westerly ridge of the Lammermuirs, and commands a gorgeous view, over the Lothians and the Firth of Forth, to the hills of Fife.—*Ord. Sur.*, sh. 33, 1863. See David Laing's *Registrum Domus de Soltre* (Bannatyne Club, 1861).

Soya. See Soay.

Soyea, a pastoral islet of Assynt parish, W Sutherland, off the mouth of Loch Inver, 2¾ miles W by S of Lochinver village. It measures 5¼ by 1⅛ furlongs, and rises to a height of 110 feet.—*Ord. Sur.*, sh. 107, 1881.

Spango Water. See Kirkconnel.

Spean, a river of Laggan and Kilmonivaig parishes, Inverness-shire, issuing from Loch Laggan (819 feet), and winding 20½ miles westward till, after a descent of 728 feet, it falls into the Lochy at Bridge of Mucomir, 3 furlongs below the Lochy's efflux from Loch Lochy. At a point 1¼ mile below Loch Laggan, the Spean receives from the S the large stream emitted by Loch Ossian; and near Bridge of Roy it receives from the N the Roy. Its other affluents, though numerous, are individually inconsiderable. Its salmon, sea trout, and river trout afford capital sport. On 9 Sept. 1873 the Queen, *en route* for Inverlochy, 'drove along through Glenspean, which is very fine and grand in some parts, the road looking down upon the rapid, rushing, gushing river, as it whirls along imbedded in rocks, and overhung with wood, while high ranges of hills, fine and pointed in shape, are seen in the distance, rising peak upon peak. Along this road I had driven when staying at Ardverikie, but I had forgotten it.' —*Ord. Sur.*, shs. 63, 62, 1873-75.

Spean Bridge. See Kilmonivaig.

Speddoch, a mansion in Holywood parish, Dumfriesshire, 10 miles WNW of Dumfries. Its owner, John Henry Gilchrist-Clark, Esq. (b. 1861; suc. 1881), holds 1499 acres in the shire, valued at £1275 per annum.—*Ord. Sur.*, sh. 9, 1863.

Spedlins Tower. See Jardine Hall.

Spey (the *Tuessis* of Ptolemy), a river rising near the centre of the southern part of Inverness-shire, and flowing first E and then NE through that county, and thereafter NE through the county of Elgin, or on the boundary between Elginshire and Banffshire—with a few stray excursions for short distances into the latter county—till it reaches the sea near the centre of Spey Bay between Lossiemouth and Portknockie. It is the most rapid river in Scotland, and in point of length and volume of water is inferior only to the Tay—including the longest tributary among the head waters of that river as forming the source—while the area of its drainage basin is inferior only to those of the Tay and Tweed. The Spey and the smaller streams flowing to it drain all the south-eastern part of Inverness-shire except the extreme S (nearly ¼ of the area of the whole county), all the eastern part of the county of Elgin (nearly half the whole area), and all the upper, and the greater portion of the central district of Banffshire (also nearly half the area of the whole county). The NW side of the drainage basin begins at Corrieyairack, which divides the upper waters of the Spey from those of the Tarff flowing to Loch Ness; and from that mountain the line of watershed stretches away to the north-eastward along the Monadhliadh Mountains, which divide it first from the Loch Ness basin and then from that of the Findhorn. At the N end of these heights the line strikes across the Slochdmuick Pass, and keeps north-eastward along the heights of Braemoray, to the E of the Knock—these separating it from the valleys of the Divie and Dorbock

(Findhorn basin). At KNOCKANDO it turns eastward along the Mannoch Hill, and, passing to the N of the village of Rothes, follows a north-easterly and northerly course to the sea. The heights last mentioned separate the Spey basin from that of the Lossie. On the SE side, beginning at the sea, the line passes southwards, to the E of the village of Fochabers, to between Mulben and Keith, where it curves first south-westward and then south-eastward round the source of the Isla, and thereafter follows mainly a south-westerly direction, first along the high ground between Glen Fiddich and the upper waters of the Deveron, and then between Glen Livet and the upper waters of the Deveron. At the upper end of Strathdeveron it becomes identical with the boundary between the counties of Banff and Aberdeen, and follows that line along the heights round the head of Strathdon which separate it from the middle part of the valley of the Avon; and farther S along those that separate Glen Avon from the upper part of the valley of the Dee, by Ben Avon (3843 feet), Beinn a Bhuird (3924), Beinn a Chaoruinn (3553), and Ben Muich Dhui (4244) to the point on the SW slope of Cairn Gorm, where the counties of Inverness, Banff, and Aberdeen meet. From this the line of watershed is identical with the boundary line first between the counties of Inverness and Aberdeen, and thereafter between the counties of Inverness and Perth, as far as the Athole Sow. This line has been already described in dealing with INVERNESS-SHIRE. The separation is, in the former case, from the basin of the Dee, and in the latter from that of the Tay. From the Athole Sow the line passes northwards close to Loch Ericht, round the N end of that loch, and back along the opposite side as far as Meall Cruaidh (2941 feet), whence it again passes northward between the Mashie Water (Spey) and river Pattack (Loch Laggan), round the N end of Loch Laggan to Carn Liath (3298). Thence it passes with a curve to the NW up the slope of Creag a' Chait to the top of Carn Leac (2889 feet), and from that across the Pass of Corrieyairack (2507) to Corrieyairack itself (2922). The total area of the basin may be taken as about 1300 square miles. The principal subsidiary valleys contained in it are those of the Dulnain on the NW and the Avon on the SE; and the whole length of the river from source to sea, following all the windings, is 107 miles.

The source is a small stream which rises about 1500 feet above sea-level on the SE side of Creag a' Chait, 7¾ miles E by S of the N end of Loch Lochy, and close to the watershed between the E and W coasts of Scotland, the head waters of the river Roy which flows to the Spean coming from the same shoulder. About 1 mile from the source this head-stream expands into the small Loch Spey (3 furlongs by 100 yards, and 1142 feet above sea-level), and from this the course is eastward for 15 miles, till beyond Cluny Castle it turns to the NE, and then more to the N as it approaches the sea. The total length of the course, inclusive of windings, in Inverness-shire, is 53¾ miles; for 5½ miles thereafter it forms the boundary between the counties of Inverness and Elgin; for more than 22 miles chiefly from the mouth of the Avon at INVERAVON to Boat of Bridge, it is more or less the boundary between the counties of Elgin and Banff; and over the rest of the distance it is through Elginshire. Thirty-three and one-half miles from the source the river expands into Loch Insh (1 × ½ mile, and 721 feet above sea-level). Within 4 miles of Loch Spey the river receives a very large number of tributary streams—forming the minor head waters—of which the chief are a stream (S) from a height of 3000 feet from Coire a Bhan-eoin W of Carn Liath; another (N) from about 2600 on Carn Leac, the Allt Yairack (N) from the Pass of Corrieyairack, and the Allt a Chaoruinn (S) from Carn Liath. In the E and W part of the course the other principal tributaries are the Markie Burn (N) from Glen Markie, Mashie Water (S) from Strath Mashie, and the Allt Breakachy (S). About 2 miles below the point where the river turns to the NE it is joined by the Truim, from Glen Truim, at the battlefield of Invernahavon; and between that and Loch Insh are the Calder (N) at Spey Bridge near Newtonmore, the Kingussie Burn (N) at Kingussie, the river Tromie (S) from Glen Tromie, and the Raitts Burn (N) at Belleville. Half-a-mile below Loch Insh is the Feshie (S) from Glen Feshie, and between this and the point where the river quits Inverness-shire are the Druie (S) from Rothiemurchus Forest and Glenmore, at Aviemore; Milton Burn (S) at Kincardine; the Nethy (S) from Abernethy Forest and Strath Nethy; and the Dulnan (NW). In the upper part of Elginshire the Spey is joined by a large number of streams, but none of them are of any great size, the chief on the NW side being the Craggan, Cromdale, Dellifur, Tulchan, and Gheallaidh Burns, and a little above the latter is the Avon from the S. Between this and Boat of Bridge the chief tributaries on the Elginshire side are the Allt Arder, Knockando Burn, Ballintomb Burn, and the burns described in the account of the parish of ROTHES; and on the Banffshire side Carron and Aberlour Burns, and the Fiddich, the latter joining at Lower Craigellachie. Below Boat of Bridge the basin narrows and the side streams are small, the largest being the Red or Orbliston Burn (W) above the bridge at the village of Fochabers.

The Spey has but little commercial importance, as no part of it is properly navigable, though there was formerly, and is to some extent still, a natural harbour suitable enough for small vessels, at the mouth of the river at Kingston. This was, however, rendered inconvenient, first by the shifting of the river mouth steadily westward subsequent to 1831, and still more so in 1860 by the cutting of a new channel at the point where the river now joins the sea—an operation rendered necessary by this shifting. Shipbuilding is still carried on at the mouth at both KINGSTON and GARMOUTH, and timber is still taken in rafts or 'floats' down the river from the woods along the middle reaches, though not to the same extent as of old. The Spey is the third salmon river in Scotland, ranking next the Tay and Tweed. The fishings are in the hands of 7 proprietors on the lower waters and 13 on the upper waters, the total rental being about £8000 a year, of which the Duke of Richmond—whose fishings extend from Boat of Bridge to the sea—has nearly £6000, the other 19 holding the rest among them. The upper fishings are poor, except when floods enable the fish to get readily past the cruive on the Richmond waters. The fishings have recently fallen off in value, their rental in 1875-76 having amounted to £11,332. No trout fishing is allowed from 15th April to 1st June, in order to protect the smolts on their way to the sea, and the net fishing closes on the 26th August, but the rod fishing not till the 15th October.

The channel along the lower part of the course often shifts, a process rendered particularly easy during floods by the loose nature of the shingle, of which the bottom and sides are composed. The shingle is constantly being moved down the river, and it is probably from boulders thus carried down that the great gravel ridges to the W of the mouth of the river have been formed. From the large extent and high lying character of the sources of the Spey itself, as well as of its principal tributaries, the river is subject to sudden and heavy freshets. The greatest was that of 1829, the damage done by which was enormous. There is a graphic description of the after appearances all along the course of the river from Kingussie downwards, in Sir Thomas Dick Lauder's *Account of the Moray Floods*. In winter and spring large masses of ice are carried down by the river, but from the rapidity of the current it is seldom that any portion of the lower part of the river is frozen completely over, though this certainly happened near the mouth in 1854. At Kingussie, Fochabers, and elsewhere there are beautifully marked river terraces.

As regards scenery, Macculloch places the Spey—and probably rightly—below all the great branches of the Tay, the Forth, the Dee, the Isla, and the Earn. The course, from the source to about the mouth of Glen Truim, lies

through an upland glen with nothing of grandeur or even picturesqueness about it, the base from which the surrounding hills rise being too far above sea-level to allow of their height telling with full force. From about Cluny Castle downwards trees begin to make their appearance along the lower heights, skirting the valley, and though some portions between this and Loch Insh are still bleak-looking, the general appearance of the country decidedly improves, though even about Kingussie and Belleville, it can hardly be said, notwithstanding the fine mountain screens, to be pretty or picturesque. About Loch Insh still farther improvement takes place, and the Queen, who passed it on the way from Balmoral to Grantown in 1860, speaks of the loch itself as 'lovely . . . though not a wild lake, quite the contrary; no high rocks, but woods and blue hills as a background.' From this onward by Kinrara, Loch Alvie, and Aviemore, there is more wood, that on the E extending to a height of 1500 feet, and forming part of the great Rothiemurchus and Glen More Forests. Kinrara itself has long been famous, both for its beauty and for its associations with the beautiful Jane, fourth Duchess of Gordon, and her son the last Duke. 'Though many splendid landscapes,' says Dr Macculloch, in one of the few grudging paragraphs he gives to the beauties of the Spey, 'are obtained along the roadside between Aviemore and Kinrara, constituted by the far-extended fir-woods of Rothiemurchus, the ridge of Cairngorm, the birch-clad hill of Kinrara, and by the variety of the broken, bold and woody banks of the Spey, no one can form an adequate idea of the beauties of this tract, without spending days in investigating what is concealed from an ordinary and passing view. By far the larger proportion of this scenery also is found near to the river, and far from the road; and the most singular portions of it lie on the east side of the water, and far beyond it, in places seldom trodden and scarcely known. This too is a country hitherto undescribed, and therefore unseen by the mass of travellers; though among the most engaging parts of the Highlands, as it is the most singular: since there is nothing with which it can be compared, or to which, indeed, it can be said to bear the slightest resemblance. Much of this depends on the peculiar forms and distribution of the ground and of the mountains, and still more on the character of the wood, which is always fir and birch; the latter, in particular, assuming a consequence in the landscape, which renders the absence of all other trees insensible; and which is seen nowhere in the same perfection, except at Blair, and for a short space along the course of the Tumel. Of this particular class of beauty Kinrara is itself the chief seat; yielding to very few situations in Scotland for that species of ornament which, while it is the produce of Nature, seems to have been guided by art. A succession of continuous birch forest covering its rocky hill and its lower grounds, intermixed with open glades, irregular clumps, and scattered trees, combines the discordant characters of wild mountain landscape and of ornamental park scenery. The Spey, here a quick and clear stream, is ornamented by trees in every possible combination, and the banks beyond, rising into irregular, rocky, and wooded hills, everywhere rich with an endless profusion of objects, and as they gradually ascend, displaying the dark sweeping forests of fir that skirt the bases of the farther mountains, which terminate the view by their bold outlines. To wander along the opposite banks is to riot in a profusion of landscape, always various and always new: river scenery, of a character unknown elsewhere, and a spacious valley crowded with objects and profuse of wood.' From Aviemore—close to which are the beautiful birch-clad crags of Upper Craigellachie—downwards the banks are often very bleak and bare, but at many points where they are well wooded—and this is not now so rarely the case as it once was—the scenery is good, more particularly about Boat of Garten, where the great Abernethy Forest stretches away to the E, and farther down about Aberlour and Lower Craigellachie, and from this almost all the way down to Fochabers. From Craigellachie downwards there are a series of fine fertile haughs chiefly on the W side of the river.

The Spey was, in the early period of Scottish history, the boundary between the province of Moray and the Scotia of that time. The first part of the course of the river lies in the district of Badenoch, from Upper to Lower Craigellachie is Speyside pure and simple or Strathspey, and below Lower Craigellachie are the haughs of Rothes, Dundurcas, Orton, and Dipple. Strathspey is the home of the Grants, whose motto of 'Stand Fast, Craigellachie,' was taken from the crags at its upper and lower extremities. It has given name to a peculiar dance somewhat slower than the reel, and which is said to have been first practised in the district. See also the articles on Laggan, Kingussie, Alvie, Rothiemurchus, Duthil, Abernethy, Cromdale, Knockando, Aberlour, Rothes, Boharm, Bellie, and Speymouth; Sir Thomas Dick Lauder's *Account of the Moray Floods* (1st ed., Edinb. 1830; 4th, Elgin, 1873); and Longmuir's *Speyside* (Aberdeen, 1860).

Speymouth, a parish in the extreme NE of Elginshire. It is bounded N by the parish of Urquhart, E by Banffshire and the parish of Bellie, SE by the Teindland district of the parish of St Andrews-Llanbryd, and NW by the parish of Urquhart. The boundary all along the E side is the centre of the course of the Spey; elsewhere it is almost entirely artificial, though in the NW at Lunan Wood it follows for ¾ mile the centre of the road along the valley of the Spey from Garmouth upwards. The greatest length, from the centre of the Spey a little below Essil south-south-westward to the top of Findlay's Seat, is 7⅜ miles; the average breadth at right angles to this is about 1⅛ mile; and the area is 6352·370 acres, of which 327·082 are water. In the N the surface is low, but rising abruptly almost at once it passes southward in an undulating plateau from 150 to 200 feet above sea-level, and with a steep bank along the course of the Spey. Towards the SW it rises still higher, reaching its greatest height in the SW corner at Findlay's Seat (861 feet). In the N the steep bank just mentioned approaches close to the river, but to the SE at Dipple there is a stretch of fine haugh having an extreme breadth of about ¾ mile. About half the parish is moorish, pastoral, or woodland, and about 100 acres along the river are pebbles or bare beach. The soil of the haugh is fertile alluvium, and that of about one-half of the rest of the area is a light loam. The remainder of the parish has a light sandy or gravelly soil, and the sub-soil all over varies from clay to gravel. The underlying rock is Old Red Sandstone, and the beds, which are of a deep red colour, are quarried for local purposes. The drainage is carried off by the Spey and a few small rivulets, of which the chief is the Red Burn, which crosses the southern part of the parish. Speymouth was formed in 1731 by the union of the old parishes of Dipple and Essil and the barony of Garmouth. The last, including Garmouth and Kingston, was originally in the parish of Urquhart, from which it was disjoined in 1649, but it was again united to its old parish in 1662. It remained in Urquhart till 1688, and was then re-transferred to Speymouth, in which it remained till 1851, when it was again joined to Urquhart. As the 'king's highway' from Aberdeen northwards has passed through the parish from a very early date, Speymouth has been the scene of several events connected with the history of Scotland. It was here that in 1087 Malcolm Ceannmor's army crossed the Spey to attack the forces of Maelsnectan, 'Ri Moreb' or King of Moray, and 'won the mother of Maelslaeht and all his best men and all his treasure and cattle.' Bower, in his *Scotichronicon*, fixes it also as the scene of the battle, in 1116, between Alexander I. and 'certain people of the Mearns and Moray' that had attacked him while he was engaged in erecting a new palace near Dundee. 'He then pursued the rebels to the river Spey, and there finding his enemies collected in great numbers on the opposite bank, and the river so swollen, and his men unwilling to cross, he gave his standard to Alexander Carron, who plunged into the stream, was followed by

the army, and his enemies were put to flight.' The details of the battle are doubtful, though there can be no doubt that some such affair took place. Wynton localises the fight at the Beauly, and not at the Spey. It was either in Speymouth or in Urquhart, though more probably in the latter, that Malcolm IV. defeated the Moray men in 1160 before he introduced his Flemish settlers into the lower district of the province. In 1296, and again in 1303, Edward I. crossed at the ford below the church, and encamped in Speymouth, probably at Redhall; and in later centuries the parish shared in all the disturbances in which the Gordons were concerned. The same ford used by Edward's army was also that selected by the troops of Cromwell and Montrose, and again in the 18th century by the forces under the Duke of Cumberland on their way to Culloden. It is noted in the records of the kirk session that there was no service in church on the 23d Feb., 9th, 16th, 23d, 30th March, or the 6th April 1746, in consequence of the presence of the Highland army in the parish. A memorandum recorded by the minister in the same volume tells that on 11 Feb., 'the first body of the rebels, on their return from Lochborough, in England, came to Fochabers, and some of them came to Stynie.' On 23 Feb. some of Crichton of Auchingoul's men 'hindered publick worship,' and on 2 March 'several rebells were in church, heard King George prayed for, and made no disturbance;' while under Tuesday, 18 March, it is recorded that 'Lord John Drummond came to the manse, and it became the rebels' headquarters at Spey. About a week after the Duke of Perth came, and the house was frequented by Lord Ogilvie, Sir Wm. Gordon of Park, Sir James Kinloch, Avochie, Cowbardie, Major Hales, Mr Fletcher of Benochie, and sometimes others, as Lord Elcho, Lord Strathallan, Lord Balmerinoch, Earle of Kilmarnock, Secretary Murray, Mr Sullivan, and many others. Though this was expensive to the minister, they used him very civilly and gave him no disturbance on point of principle, but there was no public worship during their stay.' On 12 April 'The Duke of Cumberland with his army marched from Cullen, crossed the Spey at a ford directly E of Speymouth church, with the loss of one man only drowned, and encamped from Redhall to Speymouth manse, where he sleeped.' He left on the following day, which was a Sunday, for Alves. The Highlanders had retired on the approach of Cumberland's forces, Sir John Drummond and his advisers, who had been left to guard the passage with a force of about 2000 men, deeming the position too open in the rear. There was very little wood then in the 'laigh' of Moray as compared with what there is now, and had the ford been forced the defenders would have had no chance of taking up a fresh position till they reached the Findhorn. The Highlanders seem to have behaved themselves well, as the only charge brought against them is that some of Gordon of Glenbucket's men stole about twenty shillings of poor's money from the session clerk; while it is also noted 'that the velvet mortcloth was taken away by the souldiers under the Duke of Cumberland, April 12th, 1746.'

The only person who can in any way be claimed as a distinguished native is Jane Innes, the wife of Governor Pitt, of Madras—grandmother of the Earl of Chatham and great-grandmother of William Pitt—who was a daughter of James Innes of Redhall. The main road from Aberdeen to Inverness crosses the Spey at Fochabers Bridge, and passes westward for 1½ mile across the centre of the parish. It is intersected at right angles about the middle by the road from Garmouth up the W side of the Spey. The south-western part of the parish is also traversed for 1⅞ mile by a reach of the Forres and Keith section of the Highland Railway system, on which is Fochabers station. Along the first-mentioned road is the little village of Mosstodloch, 2 miles NE of Fochabers station.

Speymouth is in the presbytery of Elgin and synod of Moray, and the living is worth £250 a year. The parish church, built in 1732, and repaired and enlarged in 1799, stands on the high ground overlooking the Spey, ¾ mile NE of Mosstodloch. Though Garmouth and Kingston are now in Urquhart *quoad civilia*, they remain for ecclesiastical and school board matters in Speymouth, and the school board has under its charge schools at Garmouth and Speymouth, which, with accommodation for 230 and 173 pupils respectively, had in 1884 attendances of 185 and 84, and grants of £166, 0s. 6d. and £69, 15s. The only landowner is the Duke of Richmond. Valuation (1860) £8392, (1883) £6581, 15s. Pop. (1861) 689, (1871) 634, (1881) 656, of whom 329 were males and 327 females. Houses (1881) 113 inhabited and 3 uninhabited. The pop. of the parish, inclusive of the portions afterwards transferred to Urquhart, was 1476 in 1831 and 1608 in 1881. —*Ord. Sur.*, shs. 95, 85, 1876.

Spital House, a mansion in Hutton parish, Berwickshire, 5½ miles W of Berwick-on-Tweed. Its owner, Wm. Compton-Lundie, Esq. (b. 1851; suc. 1871), holds 572 acres in the shire, valued at £1655 per annum.—*Ord. Sur.*, sh. 26, 1864.

Spittal. See Crailing.

Spittalfield, a village in Caputh parish, Perthshire, 3 miles N by E of Murtly station and 6½ E by S of Dunkeld, under which it has a post office.

Spittalhaugh, a fine castellated mansion in Linton parish, NW Peeblesshire, near the right bank of Lyne Water, 2 miles SSE of West Linton. Built in 1678, it was greatly enlarged and beautified by the late proprietor, Sir William Fergusson, F.R.S. (1808-77), the eminent surgeon, who received a baronetcy in 1866. His son, Sir James Ranken Fergusson, second Bart. (b. 1835), holds 1512 acres in the shire, valued at £1785 per annum.—*Ord. Sur.*, sh. 24, 1864.

Spittal of Glenshee. See Glenshee.

Spott, a village and a parish of E Haddingtonshire. The village lies towards the N of the parish, near the left bank of Spott Burn, and 3 miles S by W of the post-town, Dunbar.

The parish is bounded NW and N by Dunbar, E by Innerwick and Stenton (detached), SW by Stenton (detached) and Whittinghame, and W by the main body of Stenton. Long and narrow, it has an utmost length from N to S of 8⅞ miles, a varying width of 2½ furlongs and 3⅞ miles and an area of 7582¾ acres.* Spott or Brox Burn and Woodhall or Dry Burn drain the northern portion of the parish north-eastward direct to the German Ocean; whilst Bothwell Water flows south-south-eastward along the Innerwick boundary of the southern portion until it falls into the Whitadder at the southern extremity of the parish. Sinking to 85 feet above sea-level in the extreme N, and to 690 feet in the extreme S, the surface is an alternation of hill and dale, part of the Lammermuir range; and chief elevations, from N to S, are Doon Hill (582 feet), Spott Dod (608), Black Law (800), Lothian Edge (1157), and Bothwell Hill (1250), the first culminating on the eastern, the last on the south-western, boundary. The predominant rocks are Devonian; and the soil is clayey in some parts, but light and sandy in most. Between 2000 and 3000 acres are in tillage; about 100 are under wood; and most of the remainder is hill pasture. On the top of Doon Hill lay David Leslie's Scotch army two days before the Battle of Dunbar (1650); and Cromwell is said to have spent the night after the battle in Spott House. Elsewhere, in three or four localities, are remains or the sites of ancient hill-forts and cairns. A strange fatality appears to have waited on the incumbents of Spott in the 16th century. One, Robert Galbraith, was assassinated by John Carketle, a burgess of Edinburgh, in 1544; the next, John Hamilton, a natural son of the first Earl of Arran, became Archbishop of St Andrews, and, captured by Craufurd at Dumbarton Castle, was

* In every account, from the *New Statistical* downwards, Spott is said to comprise a main body to the N and a detached section to the S; but a glance at the Ordnance maps will show that one can walk from Spott village to Beltondod, Caldercleugh, and Bothwell, without at any point quitting the parish. The mistake arose from regarding Dunbar Common as a detached section of Dunbar parish.

hanged at Stirling in 1570; and in the same year a third, John Kello, was executed at Edinburgh for the murder of his wife. He had hanged her in the manse, and then gone and preached 'a more than usually eloquent sermon.' In the annals of witchcraft this parish is famous as almost the last place in Scotland where reputed witches were burnt, for so late as October 1705, the kirk-session records contain this entry: 'Many witches burnt on the top of Spott loan.' Spott House, a little way E by S of the village, is delightfully situated at the SW base of Doon Hill, and commands a beautiful view, away to the Bass Rock and the Isle of May. Partly a building of high antiquity, it was greatly improved soon after its acquisition, more than 50 years since, by the late proprietor, James Sprot, Esq. (1804-82), who held 1138 acres in the shire, valued at £1873 per annum. Elias de Spot swore fealty to Edward I. in 1296; and later the estate was held by the Humes, Douglases, Murrays, and Hays. It has been bought by Miss Watt of Speke Hall, Liverpool (J. Small's *Castles and Mansions of the Lothians*, Edinb. 1883). Another mansion, noticed separately, is Bower House; and, in all, 4 proprietors hold each an annual value of more, and 3 of less, than £500. Spott is in the presbytery of Dunbar and the synod of Lothian and Tweeddale; the living is worth £460. The church, surrounded by fine old trees, is a building of high antiquity, and, as restored in 1848, presents a picturesque appearance. The public school, with accommodation for 118 children, had (1884) an average attendance of 49, and a grant of £28, 18s. Valuation (1860) £6993, (1885) £6641, 13s. Pop. (1801) 502, (1831) 612, (1861) 555, (1871) 560, (1881) 579.—*Ord. Sur.*, sh. 33, 1863.

Spottes, a mansion in Urr parish, Kirkcudbrightshire, near the left bank of Urr Water, 4 miles NNW of Dalbeattie. Its owner, Alexander Young-Herries, Esq. (b. 1827; suc. 1872), holds 987 acres in the shire, valued at £920 per annum.—*Ord. Sur.*, sh. 5, 1857.

Spottiswoode, a mansion in Westruther parish, Berwickshire, 5½ miles ENE of Lauder. It is partly an old edifice, renovated, altered, and worked into harmony with a fine Elizabethan structure of about the year 1834. A terrace 300 feet long runs round the building, whose central tower rises high above the surrounding trees. The Spottiswoodes of that ilk can be traced back to the latter half of the 13th century, and have included John Spottiswood (1510-85), the superintendent of Lothian in the early period of Presbyterianism; John Spottiswood (1565-1639), Archbishop of St Andrews, who crowned Charles I. at Holyrood, became Lord High Chancellor of Scotland, and wrote the well-known *History of the Church of Scotland;* Sir Robert Spottiswood (1596-1646), Lord President of the Court of Session and Secretary of State, who was beheaded at St Andrews; and John Spottiswood, the first law professor in Edinburgh University, and the author of several works on jurisprudence, who in 1700 repurchased the lands and barony of Spottiswoode, which his grandfather, the Archbishop, had sold to the Bells in 1620. The present proprietor, Alicia Ann Spottiswoode, who succeeded her mother in 1870, and who in 1836 married Lord John Douglas-Montagu-Scott (1809-60), youngest son of the third Duke of Buccleuch, holds 11,412 acres in the shire, valued at £5426 per annum. She has composed the music of *Annie Laurie* and other popular songs.—*Ord. Sur.*, sh. 25, 1865.

Spout Bay. See Keltie Burn.

Spout of Ballagan. See Ballagan.

Spout of Garnock. See Garnock.

Springbank. See Ayton.

Springfield. See Gretna.

Springfield, a village on the south-western border of Cupar parish, Fife, near the left bank of the Eden, 3 miles SW of the town of Cupar. It has a station on the Edinburgh, Perth, and Dundee railway, a post-office under Cupar, with money order and savings' bank departments, and a *quoad sacra* parochial church. Pop. of village (1861) 524, (1871) 608, (1881) 931; of *q. s.* parish (1871) 1098, (1881) 1480, of whom 100 were in Ceres, 64 in Cults, and 1316 in Cupar parish.—*Ord. Sur.*, sh. 40, 1867.

Springfield, a seat of population, connected with paper-mills, in Lasswade parish, Edinburghshire, on the right bank of the North Esk, 1½ mile SSW of Lasswade village and 3½ miles SW of Dalkeith. Springfield House, in its vicinity, is a fine mansion in an exquisitely beautiful situation.

Springhill, a mansion in Eccles parish, Berwickshire, near the left bank of the Tweed and the village of Birgham, 4 miles W by S of Coldstream.

Springholm, a village on the mutual border of Urr and Kirkpatrick-Durham parishes, Kirkcudbrightshire, 6 miles NNE of Castle-Douglas. It has a post office under Dalbeattie.

Springkell, a mansion in Kirkpatrick-Fleming parish, Dumfriesshire, near the left bank of Kirtle Water, 4 miles E by N of Ecclefechan, and 2½ NE of Kirtle Bridge station. Erected in 1734, and greatly enlarged in 1818, it is a fine Grecian edifice, of centre and wings, with beautiful grounds. In 1609 William Maxwell acquired the barony of Kirkconnell and Springkell; and his fifth deseendant, Sir John Heron-Maxwell, sixth Bart. since 1683 (b. 1808; suc. 1844), holds 13,391 acres in the shire, valued at £8758 per annum.—*Ord. Sur.*, sh. 10, 1864.

Springwood Park, a mansion in Kelso parish, Roxburghshire, near the right bank of the winding Teviot, 1¼ mile SW of the town. Built in 1756, it figures well in the gorgeous views around Kelso; is surrounded with a finely wooded park; and has an admirable entrance gateway, formed after designs by Gillespie Graham in 1822. It is the seat of Sir George Henry-Scott Douglas, fourth Bart. since 1786 (b. 1825; suc. 1836), who was Conservative member for Roxburghshire from 1874 to 1880, and holds in it 5568 acres, valued at £6730 per annum.—*Ord. Sur.*, sh. 25, 1865.

Sprouston, a Border village and parish of NE Roxburghshire. The village, a decayed place, stands near the right bank of the Tweed, and close to Sprouston station on the North-Eastern railway, this being 20¾ miles SW of Berwick-on-Tweed, 13¾ E by N of St Boswells, and 2¼ NE of Kelso, under which there is a post office.

The parish, containing also Lempitlaw hamlet, 6 miles ESE of Kelso, is bounded N by Eccles in Berwickshire, E by Northumberland, SE and S by Linton, SW by Eckford and Kelso, W by Kelso, and NW by Ednam. Its utmost length, from NE to SW, is 5⅛ miles; its utmost breadth is 3⅝ miles; and its area is 8731½ acres, of which 96 are water. The Tweed, here a glorious salmon river, sweeps 3⅝ miles north-eastward along all the Ednam and Eccles boundary; and the lands beside it are low and flat, sinking little below and little exceeding 100 feet above sea-level. The interior is partly a ridgy swell called Hadden Rig (541 feet), which flanks the low grounds, and partly a parallel vale, which here and there is marshy; whilst the southern district is comparatively high, attaining 690 feet near Greenhead, but largely subject to the plough. The soil, a rich loam near the Tweed, degenerates towards Hadden Rig, and improves again towards the S. Trap, sandstone, and limestone have been quarried. Nearly 130 acres are under wood, plantations mostly of fir; 550 acres are waste; and all the rest of the parish is in tillage. Hadden Stank and Redden Burn were frequent meeting-places of Scotch and English commissioners for settling Border disputes; and Hadden Rig, about the year 1540, was the scene of a defeat of 3000 English horsemen by a body of Scottish troops. One pre-Reformation chapel stood at Hadden, another stood on Sprouston manor; and the burying-ground which surrounded the church of the ancient parish of Lempitlaw is still in use. The Duke of Roxburghe is chief proprietor, 3 others holding each an annual value of more than £500. Sprouston is in the presbytery of Kelso and the synod of Merse and Teviotdale; the living is worth £419. The parish church, on a gravelly eminence in the middle of the village, was built in 1781, and con-

tains 420 sittings. Two public schools, Lempitlaw and Sprouston, with respective accommodation for 90 and 87 children, had (1884) an average attendance of 61 and 73, and grants of £54, 13s. 6d. and £55, 8s. 6d. Valuation (1860) £12,533, (1884) £13,509, 13s. 8d. Pop. (1801) 1105, (1841) 1439, (1861) 1305, (1871) 1294, (1881) 1026.—*Ord. Sur.*, shs. 25, 26, 1865-64.

Spynie or **New Spynie**, a parish in the northern part of Elginshire, NW of the town of Elgin. It is bounded N by the parishes of Duffus and Drainie, E and SE by the parish of St Andrews-Lhanbryd, SSE and S by the parish of Elgin, SW by the parish of Alves, and NW by the parish of Duffus. On the N the boundary follows for 3¾ miles the drainage canal in the old basin of the Loch of Spynie, and its continuation westward to near Mid-Kintrae. On the S it follows the present and former course of the river Lossie, from the bend at Roy's Pot, NE of the town of Elgin, 3 miles upwards to Aldroughty, and thence passes still farther to the W for ¾ mile along the Monaughty Canal. The old course of the Lossie just mentioned extended from the bridge at Bishopmill along the S side of Lossie Green and the Borough Briggs Lands, rejoining the present course at The Haugh. Elsewhere the line is artificial. The length of the parish, from E to W, through the line of the farms of Westfield and Spynie, is 5⅛ miles; the width, from N to S, through the church, is fully 2⅝ miles; and the area is 5971·512 acres, of which 25·856 are water. A ridge of high land, running from ENE to WSW, near the S side of the parish, attains an altitude of 300 feet above sea-level at the top of Quarrywood Hill, the highest point in the parish. From this ridge there is a slope towards the S to the Lossie, and a longer one towards the N to the Spynie Canal, the flat ground along which in the NE is but very little above sea-level. The greater portion of the ridge just mentioned is covered with fine woods, that on the SW side, about 1 mile to the W of Elgin, being covered with a stretch of natural oak. This is the Oak Wood, and the whole of the rest of the western portion is known as Quarrywood. The eastern portion is the Hill of Spynie. Of the whole surface of the parish, about 1400 acres are under wood. The rest, except about 200 acres, is almost entirely arable, the soil varying from rich clay in the great northern hollow to a stony loam on the higher grounds. The subsoil is clay. The underlying rocks along the S and up to and beyond the top of Quarrywood Hill are Old Red Sandstone; but from a short distance beyond this, down along the hollow, as well as all through the Hill of Spynie, they belong to the rocks which have figured so prominently in geological discussion since about 1857 as 'the Elgin Sandstones.' (See ELGINSHIRE.) Boulders of rock of Jurassic age also occur scattered about the valley, chiefly in the NE. There is a small patch of limestone in the extreme E near the Palace of Spynie. Both sandstone deposits are extensively quarried for building stone, and in some places for millstones. The rock is generally of excellent quality, and varies in colour from a very light yellowish grey to red and brown. The drainage is carried off by the Lossie and the canals already mentioned, and rivulets flowing to them. Along the Lossie and on the slope northwards from Quarrywood Hill there are several well-marked river and lake terraces.

A considerable strip of land along the northern and north-eastern part of the parish was formerly covered by the waters of the LOCH OF SPYNIE. It is possible that within the historic time a shallow arm of the sea extended all along the valley of Roseisle and Duffus, from BURGHEAD to LOSSIEMOUTH; but whether this was so or not, it is certain that, long after the western portion of the hollow had become dry land, the eastern portion was occupied by a sheet of water communicating with the sea. In the NW of Spynie parish are three farms bearing the name of Kintrae, from Celtic words meaning 'the top of the tide.' In 1397 there is mention of a harbour at Spynie; and in 1451, when the lands were erected into a Regality, the right 'of harbour' was granted. The loch must at this time have been connected with the sea by the Lossie, which then flowed through it. Hollingshed, in his translation of Boece, speaks of it as 'a lake named Spiney, wherein is exceeding plentie of swans,' which were drawn thither by the abundance of a herb called 'swangirs,' which, once planted anywhere, could not be again rooted out, and which was not entirely beneficial in its results, 'for albeit that this lake be five miles in length, and was sometime within the remembrance of man verie well stocked with salmon and other fish, yet after that this herbe began to multiplie upon the same, it became so shallow that one may now wade through the greatest part thereof, by means whereof all the great fishes there be utterly consumed.' Underneath the present surface of the drained bed, evidence of the former connection of the lake with the sea may be found in a deposit of sandy mud, containing shells of oysters and a number of other marine molluscs. The Bishops of Moray were almost sole proprietors of the loch; and after the lake became shallow, they began, about the close of the 15th century, to try to drain it by deepening the bed of the Lossie, and by this means the water was kept down till after the Reformation, when, under the lay proprietor, the works were neglected and the waters increased. In 1609 the Episcopal Bishop Douglas carried out works, excluding the Lossie, and ran drains into the basin of the loch; but the troublous times of the Covenant were at hand, and so little more was done till 1779,—the loch being then about 5 miles in length and at its widest part 1 mile in breadth, and covering an extent of about 2500 acres,—when extensive works were carried out by Messrs James and Alexander Brander of Pitgaveny, which had the effect of reclaiming over 1100 acres of land. Their operations were stopped by Sir William Gordon of Gordonstown, who claimed the whole loch as his property, and the drains being neglected, the waters again began to rise. In 1808-12 a canal recommended by Telford was carried through the whole loch and on to the sea at Lossiemouth, where there were sluices for shutting out the tide. These works, which had cost the large sum of £12,740, were entirely destroyed by the great flood of 1829, and the waters again increased, till in 1860 the loss to proprietors and farmers had become so great that fresh operations were undertaken. The great drain was restored and deepened, and new self-acting sluices erected. These are four in number, and each consists of a mass of iron weighing 18 hundredweights, and very delicately poised and tightly fitted into a frame, so that they shut with the slightest pressure, and exclude all sea water. The cost of the whole works was about £8000, but the result has been highly satisfactory, and the bed is now thoroughly dry, except a portion that has been retained for sporting purposes, near Pitgaveny. This, which is cut off from the main canal by a strong bank of puddled clay, is about 110 acres in extent, and is in the parish of St Andrews. The greater portion of the land recovered has already produced, or will in course of time produce, excellent crops; but the loss of the picturesque stretch of water, frequented by all kinds of waterfowl, has been a matter of sad regret to sportsmen.

On the south-eastern margin of the old lake-basin stand the ruins of the Episcopal PALACE OF SPYNIE. The buildings, which have no doubt been the work of several successive bishops, were ranged round a quadrangle, about 50 yards in length by 44 in breadth, with a tower at each corner. The sides were occupied by buildings or protected by connecting curtain walls. A postern gate on the N led to the loch, and the principal ordinary gateway was on the E side. The shield above it bears the arms of Bishop John Innes (1406-14). The principal feature in the ruins now is the great tower at the SW corner, 60 feet high, 50 long, and 40 wide, and the outer walls are between 9 and 10 feet thick. The inner wall to the court is very much thinner, being only between 2 and 3 feet thick. The windows, which must have been unusually large, have all been protected by strong iron bars. The lower part is occupied by vaults, one of which at least seems to have been used as a dungeon. The first floor was the great hall, and above

were other large rooms, with vaulted closets and passages. One very small bedroom is associated with the name of Queen Mary, who 'supped and slept' here on 17 September 1562. At the corners were cape houses. This tower is known, from its builder, as 'Davie's Tower,' it being the practical reply made by Bishop David Stewart (1461-76) to a threat of the Gordons. The Earl of Huntly and his kin having been excommunicated, threatened that they would come and pull the bishop out of his pigeon holes at Spynie, to which the bishop replied that he would soon build a house, out of which the Earl and all his clan should not be able to pull him, and this tower was the result. It is a magnificent testimony to the worthy prelate's architectural taste. On the S wall, on the outside, are the arms of Bishops David and Andrew Stewart, and of Patrick Hepburn. On the S side of the court was a spacious tennis-court, and parallel to it the chapel. On the E were the kitchen and other offices, and round the precinct were gardens and an orchard. The castle passed in 1590 to Alexander Lindsay, Lord Spynie, who never lived in it; but he re-sold it to the Crown in 1606. After Bishop Guthrie was deposed in 1638, he tried to keep possession of this palace, which he had provisioned and garrisoned, but when he was attacked by General Munro in 1640, he was compelled to surrender, and in the subsequent troubles of the middle of the 17th century, when the armies of Montrose and the Covenanters were marching and counter-marching in the north, the building was held by Innes of Innes and Grant of Ballindalloch in the Covenanting interest. After the Restoration it became again the Episcopal residence, the last bishop who resided in it being Colin Falconer (1680-86), who died here. After the Revolution the building passed to the Crown, and it was allowed to fall to ruin; all removable portions being carried off by the people of the district. About 1825 more attention began to be given to its condition, but the mischief had been done. In 1840 it was sold to the Earl of Fife, in whose possession it still remains. In 1590 Spynie gave the title of Baron to Alexander Lindsay, fourth son of David, ninth Earl of Crawford, but the peerage became dormant on the death of George, third peer, in 1672.

To the SW of the Palace is the old church-yard, in which stood the church dedicated to the Holy Trinity, which in the early part of the 13th century served at times as the cathedral of the diocese of Moray (see Elgin). This remained the site of the parish church down to 1736, but the position being inconvenient, the church was in that year removed to its present site near the centre of the western portion of the parish, 2¼ miles NW of Elgin; and it was this that gave rise to the name of New Spynie given to the parish in connection with school board, parochial board, and registration matters. The few houses beside the church constituting the kirkton are spoken of as Quarrywood. The new church is a very plain building, with belfry and doorway taken from the old church, of which no portion is now left. The former bears the date 1723. The bell was also brought from the old church, and has the inscription, 'This Bell—For the Pearis of Spynie. Me Fecit, 1637. Soli Deo Gloria Michæl Borgertwys.' There seems to have been a Culdee church in the NW corner of the parish. It is referred to in the beginning of the 13th century as *veterem ecclesiam de Kyntra*. No trace of the building has remained for a long time, but the church-yard attached, which stood in the centre of the eastern margin field called Chapelfield, on the home farm of Westfield, was preserved until a comparatively recent date. On the S side of Quarrywood Hill are the remains of a Celtic hill strength, known locally as the Danish Camp.

The great main road from Aberdeen to Inverness passes through the southern portion of the parish for 2⅔ miles, and the roads from Elgin to Lossiemouth, Hopeman, and Burghead, also intersect it in the E and centre. There are a large number of good district roads, and a reach of the Morayshire branch of the Great North of Scotland railway system passes for ⅔ mile across the eastern end of the parish. In the eastern portion of the parish is a large brick and tile work. The only mansion is Westfield. Spynie includes the Bishopmill suburb of the town of Elgin. It is in the presbytery of Elgin and synod of Moray, and the living is worth £250 a year. The parish church, built in 1736 and repaired in 1883, contains 400 sittings. A school in Bishopmill is under the Elgin school board; under that of Spynie, New Spynie school, beside the church, with accommodation for 102 pupils, had in 1884 an attendance of 40, and a grant of £34, 11s. 2d. The principal proprietor is the Earl of Fife, and 3 others hold each an annual value of £500 or upwards, 2 hold each between £500 and £100, and there are a number of smaller amount. Valuation (1860) £4565, (1885) £5432. Pop. (1801) 843, (1831) 1121, (1861) 1600, (1871) 1612, (1881) 1620, of whom 772 were males and 848 females, while 424 were in the landward part of the parish. Houses (1881) 330 inhabited, 11 uninhabited, and 9 being built. See also R. Young's *Parish of Spynie* (Elgin, 1871).—*Ord. Sur.*, sh. 95, 1876.

Staffa (Scand. *Staphi* and *ey*, 'the island of pillars'), a small uninhabited island of the Inner Hebrides, off the W coast of Mull, in the county of Argyll, in the civil parish of Kilninian and Kilmore, and in the *quoad sacra* parish of Ulva. It is 3⅞ miles SW of the island of Ulva, 6 N by E of Iona, and the same distance from the nearest point of Mull at Gribon; and 54 by steamer W of Oban. In shape the island is an irregular oblong, with a length of less than ¾ mile, and an average width of slightly more than ¼ mile, and the area is 71·424 acres. The surface is an uneven table-land with cliffs varying in height, dropping to the sea all round. The greatest height is in the SW, and is about 144 feet. The soil is good, and produces excellent pasture for the sheep, with which the island is stocked. The black cattle that were once kept here became very wild and savage, and had to be removed. Staffa appears to have been very little noticed up till near the end of the last century, when Sir Joseph Banks, after visiting it in 1772, published a full account of its marvels in the second volume of Pennant's *Tour in Scotland*. The ship in which Sir Joseph was sailing to Iceland put into a port in Mull, and at the house of Mr Maclean of Mull he met an Irish gentleman, who told him that the day before he had seen what was, in his opinion, one of the greatest wonders of the world, though none of his Highland acquaintances seemed to have ever had their attention drawn to it. Excited by this account of the marvels to be seen, Banks made an expedition to the island, and the result was the account in Pennant's *Tour*. Since that time, and more especially since the introduction of steam navigation, Staffa has enjoyed abundant celebrity, and been visited by multitudes of admirers. The day's sail by swift steamer from Oban to Staffa and Iona is now, except in rough weather, one of the regular tourist trips during the summer months. The steamer allows passengers a short time on shore to see Fingal's Cave, but those who wish to examine the island more leisurely and thoroughly must take boat from either Ulva or Iona. On 19 Aug. 1847 the Queen and Prince Albert were here on their way to Ardverikie. 'We anchored,' says Her Majesty, 'close before Staffa, and immediately got into the barge with Charles, the children, and the rest of our people, and rowed towards the cave. As we rounded the point the wonderful basaltic formation came in sight. The appearance it presents is most extraordinary; and when we turned the corner to go into the renowned *Fingal's Cave*, the effect was splendid, like a great entrance into a vaulted hall; it looked almost awful as we entered, and the barge heaved up and down on the swell of the sea. It is very high, but not longer than 227 feet, and narrower than I expected, being only 40 feet wide. The sea is immensely deep in the cave. The rocks under water were all colours—pink, blue, and green—which had a most beautiful and varied effect. It was the first time the British standard with a Queen of

Great Britain, and her husband and children, had ever entered *Fingal's Cave*, and the men gave three cheers, which sounded very impressive there. We backed out, and then went on a little farther to look at the other cave, not of basaltic formation, and at the point called *The Herdsman*.' It is seldom, indeed, that in these turbulent seas boats can enter the cave itself comfortably as the royal boat did on this occasion, but it is not often that the sheltered landing near the centre of the E side is impracticable, as it is on the lee of the prevailing winds. The structure of the island shows a lower stratum of volcanic agglomerate, above which rises a black or dark brown compact columnar basalt, which is again surmounted by another basalt with small columns here and there, but generally amorphous. To the S of the landing-place the objects of chief interest which challenge the visitor's notice and admiration are, first, the Scallop or Clamshell Cave; second, the rock called Buachaille or the Herdsman; third, the Causeway and the Great Face or Colonnade at the SE corner of the island; fourth, Fingal's or the Great Cave on the S side; fifth, the Boat Cave; and sixth, the Cormorant's or Mackinnon's Cave at the SW corner. There are other caves in two bays on the W side of the island, and others again at the N end, and between the N end and the landing-place, but those latter groups are remarkable neither for beauty nor size, though in some of them the air, suddenly compressed by the inrolling surge, produces a sound resembling that caused by the discharge of a cannon. The form of the basaltic pillars, of which the whole of the coast and of the arches, sides, and floors of the caves are composed, is finely perfect; and the spots on the surface of the island which are bare of soil, as well as the flatter parts of the rock at the bottom of the coast-line of cliffs, show in many places the ends of the columns so regularly arranged as closely to resemble a tesselated pavement. It is this architectural regularity of structure that gives the island and its caves their particular interest and attraction, and forms one of the leading features which strike and impress a visitor, though the feeling of awe and wonder is, it must be confessed, rather driven away by the singing, whether of the *Old Hundred* or of *God Save the Queen*, which the ordinary tourist seems to consider the appropriate method of expressing his feelings in such a place. It was this feeling that prompted the first of Wordsworth's three sonnets on the *Cave of Staffa*:—

> 'We saw, but surely, in the motley crowd,
> Not one of us has felt the far-famed sight;
> How *could* we feel it? each the other's blight,
> Hurried and hurrying, volatile and loud.
> O for those motions only that invite
> The Ghost of Fingal to his tuneful Cave
> By the breeze entered, and wave after wave
> Softly embosoming the timid light!
> And by *one* Votary who at will might stand
> Gazing and take into his mind and heart,
> With undistracted reverence, the effect
> Of those proportions where the almighty hand
> That made the worlds, the sovereign Architect
> Has deigned to work as if with human Art!'

The highest point of the coast cliffs is between Fingal's Cave and the Boat Cave, where they rise to 112 feet above high-water mark. To the W of this they become lower, and at Mackinnon's Cave are only 84 feet. At the N end there is a rocky shore rising but a very short distance above sea-level.

'At the Scallop or Clamshell Cave,' says Macculloch, 'the columns on one side are bent, so as to form a series of ribs, not unlike an inside view of the timbers of a ship. The opposite wall is formed by the ends of columns bearing a general resemblance to the surface of a honeycomb. This cave is 30 feet in height and 16 or 18 in breadth at the entrance; its length being 130 feet, and the lateral dimensions gradually contracting to its termination. The inside is uninteresting. The noted rock Buachaille, the Herdsman, is a conoidal pile of columns, about 30 feet high, lying on a bed of curved horizontal ones visible only at low water. The Causeway here presents an extensive surface which terminates in a

long projecting point at the eastern side of the Great Cave. It is formed of the broken ends of columns, once continuous to the height of the cliffs. This alone exceeds the noted Giant's Causeway, as well in dimensions as in the picturesque diversity of its surface, but it is almost neglected, among the more striking and splendid objects by which it is accompanied. The Great Face is formed of three distinct beds of rock of unequal thickness, inclined towards the east in an angle of about 9 degrees. The thickness of the lowest bed at the western side is about 50 feet; but in consequence of the inclination, it disappears under the sea, not far westward of the Great Cave.' The second—the columnar bed—is of unequal thickness, being 36 feet at the western side, and 54 where the water first prevents its base from being seen. The unequal thickness of the upper bed produces the irregular outline of the island. In respect of regularity the pillars fall somewhat short of those of the Giant's Causeway. 'Very often they have no joints; sometimes one or more may be seen in a long column: while, in other places, they are not only divided into numerous parts, but the angles of the contact are notched. They are sometimes also split by oblique fissures, which detract much from the regularity of their aspect. These joints are very abundant in the columns that form the interior sides of the Great Cave, to which, indeed, they are chiefly limited; and it is evident, that the action of the sea, by undermining these jointed columns, has thus produced the excavation; as a continuation of the same process may hereafter increase its dimensions. The average diameter is about two feet; but they sometimes attain to four. Hexagonal and pentagonal forms are predominant; but they are intermixed with figures of three, four, and more sides, extending even as far as to eight or nine, but rarely reaching ten.'

Round a projecting corner of cliff from the Great Colonnade is the magnificent Fingal's Cave, worthy in the grandeur of its association with the grandest of the Ossianic heroes:—

> 'Where as to shame the temples deck'd
> By skill of earthly architect,
> Nature herself, it seem'd, would raise
> A Minster to her Maker's praise!
> Not for a meaner use ascend
> Her columns, or her arches bend;
> Nor of a theme less solemn tells
> That mighty surge that ebbs and swells,
> And still, between each awful pause,
> From the high vault an answer draws,
> In varied tone prolong'd and high,
> That mocks the organ's melody.'

The height from the top of the arched roof to the top of the cliff is 30 feet, and downwards to the mean level of the sea 66 feet. The pillars on the western side are 36 feet high, and those on the eastern side only 18, though the upper ends are nearly in the same horizontal line. The breadth at the entrance is 42 feet, and this is maintained till within a short distance of the end of the cave, where it is reduced to 22 feet. The extreme length is 227 feet. The regularity of the arch and entrance is best seen from the sea at some little distance, but good views are also to be obtained from the point of the Causeway at low water. A path, now rendered more secure by a strong rope passing through iron supports, leads along the eastern side to near the end; but care requires to be taken, as the rock is damp and slippery, and occasionally, though very very rarely, enormous tidal waves come rushing in. A party of tourists were overtaken, inside, by one of these in August 1884, and three of them swept away and drowned. The columns extend inward along the sides of the cave, and the ceiling, which is divided by a longitudinal fissure, varies in different places. At the outer portion of the cave the roof consists of volcanic ash, in the middle of broken ends of columns, and at the end portions of both of these rocks come in. As the sea, even at full ebb of the lowest tide, always remains of considerable depth, 'the only floor of this cave is the beautiful green water, reflecting from its white bottom those tints

which vary and harmonise the darker tones of the rock, and often throw on the columns the flickering lights which its undulations catch from the rays of the sun without.'

'Fingal's Cave,' says Wilson in his *Voyage Round the Coasts of Scotland*, is indeed a most magnificent example of Nature's architecture. A vast archway of nearly 70 feet in height, supporting a massive entablature of 30 feet additional, and receding for about 230 feet inwards —the entire front, as well as the great cavernous sides, being composed of countless complicated ranges of gigantic columns, beautifully jointed, and of most symmetrical, though somewhat varied forms—the roof itself exhibiting a rich grouping of overhanging pillars, some of snowy whiteness, from the calcareous covering by which they have become encrusted—the whole rising from and often seen reflected by the ocean waters—forms truly a picture of unrivalled grandeur, and one on which it is delightful to dwell even in remembrance. How often have we since recalled to mind the regularity, magnitude, and loftiness of those columns, the fine overhanging cliff of small prismatic basalt to which they gave support, worn by the murmuring waves of many thousand years into the semblance of some stupendous Gothic arch,

'"Where through the long-drawn aisle and fretted vault"

the wild waves ever urge their way—and the receding sides of that great temple, running inwards in solemn perspective, yet ever and anon, as ocean heaves and falls, rendered visible in its far sanctuary by the broad and flashing light, reflected by the foaming surges sweeping onwards from below! Then the broken and irregular gallery which overhangs that subterranean flood, and from which, looking upwards and around, we behold the rich and varied hues of red, green, and gold which give such splendid relief to the deep and sombre coloured columns—the clear bright tints which sparkle beneath our feet from the wavering yet translucent sea—the whole accompanied by the wild yet mellow and sonorous moan of each successive billow, which rises up the sides or rolls over the finely formed crowns of the lowlier and disjointed pillars—these are a few of the features of this exquisite and most singular scene which cannot fail to astonish the beholder.'

The Boat Cave, so called from being accessible only by sea, is a long mine-gallery-like passage, 12 feet wide, 16 high, and 150 deep, hollowed out in the bottom agglomerate. It owes its interest entirely to the range of pillars that overhangs it. The Cormorant's, Scart's, or Mackinnon's Cave is easy of access; it terminates in a gravelly beach on which a boat may be drawn up. It is noteworthy for the overhanging pillars, as well as for the effect its wide dark entrance produces when seen from the sea to the SW of the island. The height of the entrance is 50 feet, and the breadth 48, and these dimensions are maintained almost the same to the very end, which is 224 feet from the mouth. The caves and cliffs are frequented by large numbers of sea-birds of different kinds, of which the kittiwakes and the razor-backed auk rear their young in Fingal's Cave. See also Graham's *Staffa and Iona Described and Illustrated*.

Staffin. See SKYE and STEINSCHOLL.

Stair, a parish of Kyle district, Ayrshire, whose church is beautifully situated near the left bank of the river Ayr, 1⅜ mile S of Tarbolton station, and 6½ miles ENE of Ayr. Tarbolton is the post-town, and there is a post office of Stairbridge, designated after a three-arch bridge of 1745. The parish, formed out of Ochiltree in 1673, is bounded NW and N by Tarbolton, NE and E by Mauchline, SE and S by Ochiltree, and SW and W by Coylton. Its utmost length, from NE to SW, is 5⅛ miles; its utmost breadth is 2¼ miles; and its area is 5449⅛ acres, of which 73 are water, and 1940½ belong to two detached portions. Of these, one containing Trabbochburn farm, and completely surrounded by Ochiltree, is very small, only 6 by 2¼ furlongs; the other, containing DRONGAN station, and surrounded by Ochiltree and Coylton, has an utmost length from N by W to S by E of 2⅜ miles, and varies in breadth between 1 furlong and 2¼ miles. LUGAR Water flows 1 mile north-north-eastward along all the eastern boundary to the river AYR, which itself winds 7½ miles west-north-westward and south-westward along all the north-eastern, northern, and north-western boundary, though the point where it first touches and that where it quits the parish are but 4⅛ miles distant as the crow flies. The scenery along its deep gorge is very beautiful, especially at Barskimming. The Water of COYLE traces all the western boundary of the larger detached portion. The surface undulates gently, at no point sinking much below 200 feet above sea-level, at none much exceeding 300 in the main body or 400 in the detached portion. Sandstone of various qualities, some of them well adapted for building, is plentiful, and has long been quarried; coal has also been largely mined; the celebrated Water-of-Ayr (now 'Tam o' Shanter') stone has been quarried on the Dalmore estate since 1789; and plumbago or black-lead was worked between 1830 and 1850. The soil, in the hollows or small vales along the streams, is generally sandy loam; but the rest of the parish consists of stiff clay. Most of the lands of the parish are disposed for tillage or the dairy; but more than 700 acres are under wood. The chief antiquities are remains of two old towers at Trabboch and Drongan. Stair House, near the church, is an antique corbie-stepped building, with round towers at the angles. In 1450 William de DALRYMPLE acquired the lands of Stair-Montgomery by marriage with Agnes Kennedy; and their eighth descendant, James Dalrymple (1619-95), was created a baronet in 1664, and Viscount Stair in 1690. His son, John (1648-1707), of Glencoe notoriety, in 1703 was raised to the earldom of Stair; and *his* son and successor, John (1679-1747), best known as Field-Marshal Stair, is said, as a mere boy, to have accidentally shot his elder brother in a room on the ground floor of Stair House. The estate was disposed of by the Stair family, but was repurchased about the year 1826. (See LOCHINCH.) Dalmore House is a fine castellated edifice of 1880-81; and another mansion is BARSKIMMING, noticed separately. Three proprietors hold each an annual value of more, and four of less, than £500. Stair is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £347. The church is a Gothic edifice of 1864, and contains 400 sittings. The public school, with accommodation for 150 children, had (1884) an average attendance of 94, and a grant of £78, 14s. Valuation (1860) £6478, (1885) £7834, 16s., *plus* £1959 for railway. Pop. (1801) 563, (1841) 823, (1861) 743, (1871) 734, (1881) 928.—*Ord. Sur.*, sh. 14, 1863.

Standrig. See WALLACETOWN.

Stane, a village in Cambusnethan parish, Lanarkshire, on the left bank of South Calder Water, in the vicinity of Shotts Ironworks, 5 furlongs SE of Shotts station, and 6½ miles ENE of Wishaw. It dates from ancient times; is now associated chiefly with the Shotts Ironworks and with extensive collieries; and has an Evangelical Union chapel. Pop. (1871) 937, (1881) 911.

Stanely Castle, an ancient seat of the Danzielstons, in Abbey-Paisley parish, Renfrewshire, at the northern base of the Braes of GLENIFFER, 2 miles SSW of Paisley. A massive corbelled tower, 40 feet high, it is in a state of fair preservation, and since 1837 has been engirt by a reservoir of the PAISLEY waterworks.—*Ord. Sur.*, sh. 30, 1866.

Stanhope Burn. See DRUMMELZIER.

Stanley, a Perthshire village in Auchtergaven and Redgorton parishes, on the right bank of the winding Tay, 5 furlongs S by W of Stanley Junction on the Caledonian railway (1847), this being 8½ miles SE of Dunkeld, 8§ SW of Coupar-Angus, and 7¼ N by W of Perth. It owes its origin to extensive cotton-mills, erected in 1785 under the auspices of the celebrated Arkwright; and it has shared the fluctuating fortunes of these mills, which were stopped from 1814 to 1823, and then acquired by Dennistoun, Buchanan, & Co., who spent £160,000 on their improvement, and employed 1200 workers. The cotton famine of 1862 occasioned another stoppage, but since 1876 the works have greatly

revived under the new and able management of Col. Sandeman. They are driven by water-power, brought from the Tay with a fall of 25 feet, and led to the mills by a tunnel 800 feet long. The situation of Stanley, on a considerable elevation above the river, is pleasant and salubrious. There are two places of worship in the town—the one Established, the other Free. The former, a large and handsome edifice, with 1150 sittings, was erected in 1828 at a cost of over £5000, and was raised to *quoad sacra* status in 1877. Its tower, 85 feet high, forms a conspicuous object to the view of the surrounding country. A public hall, with accommodation for 200 persons, was built in 1880; and Stanley besides has a post office, with money order, savings' bank, and telegraph departments, gas-works (for the mills only), a public library, and a public school. Stanley House,* to the E of the village, is an ancient mansion dating from the first half of the 15th century, but greatly altered during the last hundred years. Sheltered to the N by a crescent-shaped hill, which rises 135 feet above the Tay, it stands on a beautiful haugh, surrounded by grand old trees, including a broad beech avenue. It was once a seat of the Lords Nairne, and has memories of the Jacobite third lord, who escaped from its dining-room after the '45; whilst 'Lady Nairne's Tea-House' still crowns the top of the hill. At Stanley House, too, John Leech drew for *Punch* 'Mr Briggs landing his first salmon.' The present proprietor, Col. Francis Stewart Sandeman, is a grand-nephew of the poetess, Lady Nairne. Pop. of village (1841) 1945, (1851) 1769, (1861) 1274, (1871) 932, (1881) 1030, of whom 596 were females, and 797 were in Redgorton parish; of *q. s.* parish (1881) 1276, of whom 856 were in Auchtergaven, 98 in Kinclaven, and 322 in Redgorton. Houses in village (1881) 275 occupied, 27 vacant, 2 building.—*Ord. Sur.*, sh. 48, 1868. See also CAMPSIE, INCHBERVIE, AUCHTERGAVEN, and pp. 511-516 of Thos. Hunter's *Woods and Estates of Perthshire* (Perth, 1883).

Starley Burn. See BURNTISLAND.

Start Point, a headland at the eastern extremity of Sanday Island in Orkney, 2⅜ miles SE of Tafts Ness, 5 SSE of the southern extremity of North Ronaldshay, and 11 NE of Papa Stronsay. It terminates a narrow peninsula 1¾ mile long; was formerly, with that peninsula, the scene of numerous shipwrecks; and was crowned, in 1802, by a lofty stone beacon, transmuted, in 1806, into a lighthouse, which now shows a fixed red light, visible at a distance of 14½ nautical miles.

Staxigoe, a fishing village in Wick parish, Caithness, 2¼ miles NE of Wick town. A place of some antiquity, it retains, in a state of tolerable preservation, two store houses which were used by the Earls of Caithness for the reception of grain, in the times when rents were paid in kind; and has a public school and a fairly good natural boat harbour.

Steel. See MONKS BURN.

Steele-Road Station. See CASTLETON, Roxburghshire.

Steinscholl, a hamlet in Kilmuir parish, and a *quoad sacra* parish, partly also in Snizort parish, Isle of Skye, Inverness-shire. The hamlet, called sometimes Staffin, lies on the E coast of Trotternish peninsula, near the head of Staffin Bay, 18 miles N of Portree. It has a post office (Staffin) under Portree, and an inn. The *quoad sacra* parish, consisting principally of the ancient parish of Kilmartin, which now is united to Kilmuir, was constituted by the ecclesiastical authorities in 1833, and reconstituted by the Court of Teinds in 1847. It is in the presbytery of Skye and the synod of Glenelg; the stipend is £120, with a manse and a glebe worth jointly £16 a year. The parochial church was built by Government, and contains 350 sittings. Pop. of *q. s.* parish (1871) 1228, (1881) 1314, of whom 17 were in Snizort.

* So named, about the beginning of the 18th century, after Lady Amelia Sophia Stanley, daughter of the Earl and the famous Countess of Derby, and herself Marchioness of Athole. Her fourth son, Lord William Murray, in 1683 succeeded his father-in-law as second Lord Nairne.

Stemster House. See BOWER.

Stenhouse, a hamlet in Liberton parish, Edinburghshire, on Burdiehouse Burn, ¾ mile NW of Gilmerton.

Stenhouse, a mansion in Larbert parish, Stirlingshire, in the northern vicinity of Carron Iron-works, 1¼ mile E by N of Larbert station. Built in 1622, it has the form of two sides of a rectangle, with turrets at its five external angles. William Bruce, second son of Sir Alexander Bruce of Airth, in 1611 obtained from his father a charter of the lands of Stenhouse. He was created a baronet in 1629; and his seventh descendant, Sir William Cuningham Bruce, ninth Bart. (b. 1825; suc. 1862), holds 780 acres in the shire, valued at £2050 per annum.—*Ord. Sur.*, sh. 31, 1867.

Stenhousemuir, a small town in Larbert parish, Stirlingshire, 3 furlongs NE of Larbert station, and 3 miles NNW of Falkirk. It presents an orderly and pleasant appearance; consists chiefly of one-story and two-story houses, many of them with gardens attached; has a post office, with money order, savings' bank, and telegraph departments, a branch of the Royal Bank, a public hall, a Free church, and a public school; and adjoins the large common on which the Falkirk trysts have been held since 1785. Pop. (1841) 1206, (1861) 1392, (1871) 1872, (1881) 2617.—*Ord. Sur.*, sh. 31, 1867.

Stenness, an Orkney parish, whose church stands near the SE shore of the Loch of Stenness, 5½ miles NE of Stromness and 10½ W by N of Kirkwall, under which there is a post office. It is bounded SE and S by Orphir, W by the Bay of Ireland, NW by the Loch of Stenness and Sandwick, N by Harray, and NW by Firth, to which last it is *quoad civilia* united. Its utmost length, from E to W, is 5⅛ miles; and its utmost breadth, from N to S, is 4¼ miles. Several burns drain the interior to the Loch of Stenness or the Bay of Ireland; and the surface, largely consisting of moorland and heathy ridges, attains a maximum altitude of 514 feet above sea-level at a point 1⅝ mile S by E of Stenness church. The Loch of Stenness consists of two portions—upper and lower, or northern and south-western. The upper, called sometimes the Loch of Harray, extends 4¾ miles south-south-eastward, and varies in width between 3 furlongs and 1¾ mile; the lower extends 3¾ miles south-eastward, and has a maximum width of 1½ mile. There are boats on the loch, which contains abundance of sea-trout, yielding capital sport in September. Hugh Miller, in his *Footprints of the Creator* (1849), describes the Loch of Stenness as 'a large lake about 14 miles in circumference, bare and treeless, like all the other lochs of Orkney, but picturesque of outline, and divided into an upper and a lower sheet of water by two long narrow promontories, that jut out from opposite sides, and so nearly meet in the middle, as to be connected by a thread-like line of road, half mound, half bridge, and known as the Bridge of Brogar. "The Loch of Stennis," says David Vedder, the sailor-poet of Orkney, "is a beautiful Mediterranean in miniature." It gives admission to the sea, the Bay of Ireland, by a narrow strait, crossed like that which separates the two promontories in the middle by a long rustic bridge, the Bridge of Waith. In consequence of this peculiarity the lower division of the lake is salt in its nether reaches, and brackish in its upper ones, while the higher division is merely brackish in its nether reaches, and fresh enough in its upper ones to be potable. Viewed from the E, in one of the long clear sunshiny evenings of the Orkney summer, it seems not unworthy the eulogy of Vedder. There are moory hills and a few rude cottages in front, and in the background, some 8 or 10 miles away, the bold steep mountain masses of Hoy; while on the promontories of the lake, in the middle distance, conspicuous in the landscape, from the relief furnished by the blue surrounding waters, stand the tall grey obelisks of Stenness.' These lichened 'Standing Stones of Stenness' are second of their kind in Britain to those only of Stonehenge. They occur in two groups—the smaller (composed, however, of the larger stones) on the

south-eastern peninsula, and the larger or 'Ring of Brogar' on the north-western. The smaller, 104 feet in diameter, with an outside ditch 50 feet in width, originally consisted of twelve stones, 15 to 18½ feet high; but now only three remain, the largest prostrate, the other two still erect. Remains of a dolmen exist within this circle, near which, at the S end of the Bridge of Brogar, is a monolith 18 feet high, the finest of all the group. In another direction is a lesser monolith, only 8 feet high, 3 feet broad, and 9 inches in diameter. It is pierced with a circular hole, and by Mr Fergusson, in his *Rude Stone Monuments* (1872), is identified with the 'Stone of Odin,' familiar to readers of Scott's *Pirate*. The Ring of Brogar, 340 feet in diameter, is likewise encompassed by an outer ditch, 1071 feet in diameter, 31 to 33 wide, and 6 deep. It originally consisted of sixty stones, 6 to 15 feet high; but only fifteen, 3 to 14½ feet high, are now standing, with remains of twenty-two others. The material of all is Old Red Sandstone. The famous tumulus of MAESHOWE has been noticed separately. Near it is the House of Stenness or Turmiston, a grey old-fashioned building of no very imposing appearance. From it Scott makes the 'Pirate' see the burning of his ship in Stromness Bay. In 1879 Stenness, with a small portion of the civil parish of Sandwick, was formed into a *quoad sacra* parish in the presbytery of Cairston and the synod of Orkney. The minister's stipend is £130. The church was built in 1793. There are a Free Church preaching-station and a public school. Pop. of *q. s.* parish (1881) 697, of whom 48 were in Sandwick.

Stenscholl. See STEINSCHOLL.

Stenton, a village and a parish of Haddingtonshire. The village stands near the right bank of Souchet Water, 5¼ miles SW of Dunbar, and 4 SE by S of East Linton or Prestonkirk, under which it has a post office.

The parish, containing also Pitcox village, 1½ mile ENE, consists of a main body and two detached sections. The main body is bounded N by Dunbar, E and SE by Spott, SW and W by Whittinghame, and NW by Prestonkirk. Its utmost length, from N by W to S by E, is 4⅜ miles; its breadth varies between 3¼ furlongs and 4½ miles; and its area is 4818⅔ acres. The larger of the two detached sections, containing Millknowe farm, 8¼ miles SSE of Stenton village and 12 NW of Duns, is separated from the southern extremity of the main body by a strip of Spott, 2½ furlongs wide at the narrowest; and is bounded N and E by Spott, S by Cranshaws in Berwickshire, and SW, W, and NW by Whittinghame. Its utmost length, from NNW to SSE, is 5⅔ miles; its breadth varies between ¼ and 1¾ mile; and its area is 2547¼ acres. The smaller or Friardykes section, 3 furlongs E of the Millknowe section, is bounded NE and SE by Innerwick, SW and NW by Spott; and, with an utmost length and breadth of 9½ and 6 furlongs, has an area of 340¼ acres. Thus, the area of the entire parish is 7706¼ acres. WHITTINGHAME or Beil Water flows 2½ miles east-north-eastward along the Whittinghame boundary and across the northern interior, and, at the point where it first touches the parish, is joined by Souchet Water, running 2⅝ miles north-by-eastward along the western border. Pressmennan Lake, lying in a deep ravine, ⅔ mile SSE of the village, extends 1¼ mile north-eastward, but nowhere is wider than 70 yards. It was formed about 1819 by the construction of a strong breastwork between the hill-screens of the ravine near a point where they stoop gradually to the plain. The hill-screens here are undulating and richly wooded, and, coming down in steep high banks upon the margin of the lake, sweep along in sinuous parallels, so as to render its configuration serpentine; whilst they are cut by walks and gemmed with attractions, which render them, jointly with the lake, one of the most delightful pieces of close landscape in Scotland. Its waters, which are strictly preserved, abound in trout, originally brought from Loch Leven; and it sends off Bennets or Spott Burn north-eastward towards the German Ocean. The drainage of both the detached sections belongs to the basin of WHITADDER WATER, which, rising in WHITTINGHAME, flows 4 miles south-south-eastward and eastward along all the south-western and southern boundary of the Millknowe portion. In the extreme N the surface declines to 97 feet above sea-level, in the extreme S (at St Agnes) to 700; and between these two points it rises to 900 feet at Deuchrie Dod, 1000 at Friardykes Dod, and 1250 at Bothwell or Spartleton Hill —summits these of the LAMMERMUIR HILLS. The rocks are variously Devonian, Silurian, and eruptive; and the soil of the arable lands is partly of a light quality suited to the turnip husbandry, but mainly of an argillaceous kind, varying from stiff to loamy. Little more than 2000 acres are in tillage; about 400 acres are under wood; as much or rather more is in permanent pasture; and the rest of the land is either hill-pasture or waste. Beil House, noticed separately, was a seat of Lady Mary Nisbet-Hamilton, who died in 1883, and who was much the largest proprietor, 1 other holding an annual value of more, and 2 of less, than £500. (See DIRLETON.) Stenton is in the presbytery of Dunbar and the synod of Lothian and Tweeddale; the living is worth £400 (22 chalders). The parish church, at the village, is a handsome Gothic edifice of 1829, erected from designs by W. Burn at a cost of over £2000, and opened by Dr Chalmers, with 400 sittings and a fine tower. The parish was long called Pitcox, from the village of that name, where stood the original church; and it seems to have acquired the designation of Staneton, or Stonetown, from the stoniness of the ground in the district around the church. In ancient times it was first a chapelry and next a prebend of Dunbar and a rectory. The public school, with accommodation for 124 children, had (1884) an average attendance of 103, and a grant of £100, 0s. 6d. Valuation (1860) £6302, (1885) £6245, 15s. Pop. (1801) 620, (1831) 686, (1861) 692, (1871) 612, (1881) 594.—*Ord. Sur.*, sh. 33, 1863.

Stenton, a mansion in Caputh parish, Perthshire, delightfully situate on the left bank of the winding Tay, opposite Murtly Castle, at the southern base of the wooded Craig of Stenton, and 3¼ miles SE of Dunkeld. Its oldest part bears date 1745; but the larger portion, in the Italian style, was built in 1860 by the present proprietor, Thomas Graham Murray, Esq. (b. 1816), who holds 185 acres in the shire, valued at £209 per annum.—*Ord. Sur.*, sh. 48, 1868.

Stepps, a station near the mutual boundary of Cadder and Shettleston parishes, Lanarkshire, on the Caledonian railway, 4½ miles E by N of Glasgow.

Sterling Hill. See PETERHEAD.

Steuartfield. See STEWARTFIELD.

Stevenson, a mansion in Haddington parish, Haddingtonshire, near the right bank of the Tyne, 2½ miles ENE of Haddington town. John Sinclair, an Edinburgh merchant, who purchased the barony of Stevenson, was created a baronet in 1636; and his eighth descendant, Sir Robert Charles Sinclair, ninth Bart. (b. 1820; suc. 1863), holds 473 acres in Haddingtonshire and 18,874 in Caithness, valued at £1042 and £5285 per annum.—*Ord. Sur.*, sh. 33, 1863. See MURKLE.

Stevenston, a town and a parish in Cunninghame district, Ayrshire. The town, lying ⅔ mile inland, is 2¾ miles E of Ardrossan, 1¼ mile ENE of Saltcoats, and ½ NNW of Stevenston station on the earliest section (1832) of the present Glasgow and South-Western system, that station being 2⅝ miles SW of Kilwinning Junction and 28½ SW of Glasgow. It consists of a street ½ mile long, intersected by some cross streets; and commands a fine view of the Bay of Ayr and the neighbouring parts of the Firth of Clyde, magnificently screened in the distance by Brown Carrick Hill and the Arran mountains. It is a place of so high antiquity as to be mentioned in a charter of the year 1240. Its inhabitants at a former period, and those of an extinct neighbouring village called Pipers Heugh, were famed for the making of Jews' harps. A large proportion of its present male inhabitants are employed at the neighbouring coal mines and works; and a con-

siderable number, but much fewer now than once, are weavers of silk and cotton fabrics. Stevenston has a post office, with money order, savings' bank, and telegraph departments, 3 hotels, a gas company, a police station, and a cemetery. The parish church is a handsome edifice of 1833, restored in 1882, with a steeple 120 feet high, and 1500 sittings; and a mission hall, with accommodation for nearly 300 persons, was erected in 1883 at a cost of £400. There is also a Free church; and the public school, in the centre of the town, is a recent and commodious building. Pop., inclusive of Ardeer Ironworks (1861) 3475, (1871) 3140, (1881) 3556, of whom 1790 were males. Houses (1881) 737 inhabited, 40 vacant, 4 building.

The parish, containing also part of the town of Saltcoats, is bounded N by Kilwinning, E by Kilwinning and Irvine, SE by Dundonald, SW by the Bay of Ayr, and W and NW by Ardrossan. Its utmost length, from NW to SE, is 4½ miles; its utmost breadth is 2⅝ miles; and its area is 6⅝ square miles or 4268½ acres, of which 424⅝ are foreshore and 72⅜ water. The Garnock curves nearly 3 miles south-by-eastward along the Kilwinning and Irvine boundary, till it falls into the river Irvine, which, itself dividing Stevenston from Dundonald, flows ¼ mile west-south-westward to its mouth at Irvine Bar. Triangular Ashgrove or Stevenston Loch (3⅜ × 2¼ furl.) lies at the meeting-point with Ardrossan and Kilwinning parishes, and sends off a rivulet 2½ miles southward, through the town of Stevenston, to the sea. The coast-line, extending 4¼ miles north-westward from the mouth of the Irvine to Saltcoats harbour, is low; and all the tract between the beach and the Garnock is occupied by the desolate Ardeer Sandhills, 50 to 90 feet high. Here, 1¾ mile SSE of the town of Stevenston, is the extensive factory of Nobel's Explosives Company, founded in 1873. It covers an area of nearly 1 square mile, comprises thirty cartridge huts and a similar number of other wooden erections, employs 250 men and women, and on 8 May 1884 was the scene of a dreadful explosion, by which ten women were killed and four injured (*Ill. London News*, 26 April 1884). Under Ardeer have been noticed the ironworks (1852) of Messrs Merry & Cunninghame, the coal mines, and the valuable sandstone quarry. The rest of the parish is rather hilly, attaining 104 feet near Seabank, 215 on the western border near Middlepart, and 288 at the north-western corner. This more elevated district, whose soil consists chiefly of stiffish clay or loam, is well enclosed and cultivated, and in some places finely wooded. The parish derives its name from Stephen Loccard or Lockhart, whose father about 1170 obtained a grant of it from Richard de Morville, Lord of Cunninghame and Constable of Scotland. The second steam engine ever employed in Scotland was set up in 1719 for pumping water between Saltcoats and the town of Stevenston. Ruined Kerelaw Castle is noticed separately, as also are the mansions of Hayocks, Hullerhurst, and Kerelaw. Six proprietors hold each an annual value of more than £500, and six of between £100 and £500. Stevenston is in the presbytery of Irvine and the synod of Glasgow and Ayr; the living is worth £500. Prior to the Reformation the parish was a vicarage under the monks of Kilwinning. Two public schools—Kyles Hill and Stevenston—with respective accommodation for 126 and 750 pupils, had (1884) an average attendance of 128 and 518, and grants of £102, 15s. 6d. and £443, 15s. A new school, with accommodation for 300 children, was opened at Saltcoats in 1885 to take the place of Kyles Hill, and near the same site. Valuation (1860) £9865, (1885) £21,546, 7s. 8d., *plus* £1920 for railway. Pop. (1801) 2146, (1831) 3544, (1851) 3811, (1861) 5452, (1871) 5019, (1881) 5694.—*Ord. Sur.*, sh. 22, 1865.

Stewartfield, a village in Old Deer parish, Aberdeenshire, 2½ miles SW of Mintlaw, and 11½ WSW of Peterhead. Founded in the latter part of last century, and for some time called Crichie, it now has a post office under Mintlaw, a Free church (1843), a U.P. church (1822; 440 sittings), a Congregational chapel (1801; 300 sittings), and a girls' public school. Pop. (1841) 614, (1861) 751, (1871) 647, (1881) 675.—*Ord. Sur.*, sh. 87, 1876.

Stewarton, a town and a parish of Cunninghame district, Ayrshire. The town, standing, 300 feet above sea-level, on the right bank of Annick Water, has a station upon the Glasgow, Barrhead, and Kilmarnock Joint railway, 5⅜ miles N by W of Kilmarnock, and 18⅜ SW by S of Glasgow. Annick Water, while passing alongside the town, makes a beautiful semicircular sweep of such scope as to measure nearly ¾ mile along the chord; and it is spanned by three bridges, respectively at the ends and in the middle of the sweep. One street, extending along the chord of the semicircle, and prolonged upon the margin of the stream, runs fully 1 mile from NE to SW, and carries along the Glasgow and Irvine highroad. Another street opens from the bridge at the middle of the semicircular sweep, cuts the former street at right angles, and carries along the Kilmarnock and Paisley road. Some minor thoroughfares belong to the body of the town, and considerable clusters of buildings form suburbs. Stewarton may vie with any town of its size in the West of Scotland for regularity, beauty, and general attractions. But though a place of considerable antiquity it was for centuries a mere obscure village; and not till the close of the 18th century did it decidedly assume the healthful, growing, and well-to-do appearance by which it has since been distinguished. Most of the houses of its operatives have gardens attached to them; and many of the houses of its middle or better classes are substantial or even handsome structures. The prosperity of Stewarton has arisen wholly from manufactures, chiefly in the department of woollen fabrics. The making of tartan and other woollen bonnets has long been carried on, the making of military forage caps forming in particular a staple manufacture. A score of firms are engaged in the trade, which, according to the latest statistics published, employs about 1800 knitters, 500 liners, and 200 finishers, and produces goods to the annual value of £90,000. More than fifty years since a great impulse was given, and much increase to trade and population occasioned, by the introduction of carpet manufactures and worsted-mills. Dyeing and spindle-making are also carried on. Stewarton has a post office, with money order, savings' bank, and telegraph departments, branches of the Royal, Clydesdale, and Union Banks, a savings' bank, 18 insurance agencies, gas-works (1832), an hotel, a public library and reading-room (1810), etc. Thursday is market-day; and fairs are held on the Monday before the first Tuesday of May, the Wednesday before the last Thursday of October, and the Wednesdays of April and May before Glasgow 'Skeir' Friday and Rutherglen 'Beltan Fair.' The parish church, built in 1696, and greatly enlarged in 1825, contains 1300 sittings. The Free church was built in 1828 by a Secession congregation who had recently joined the Church of Scotland; and, standing conspicuously on a rising-ground nearly in the centre of the town, has a spire 80 feet high, and 800 sittings. The U.P. church, with 592 sittings, was erected in 1854; and there are also Congregational and Wesleyan chapels. The public school is a recent and handsome edifice. Prior to 1871, the town partly adopted the General Police and Improvement Act (Scot.) of 1862, and it is governed by a chief and two junior magistrates and six commissioners. Municipal voters (1885) 520. Pop. (1833) 2969, (1851) 3164, (1861) 3145, (1871) 3299, (1881) 3130, of whom 1414 were males and 1716 females. Houses (1881) 626 occupied, 49 vacant, 4 building.

The parish is bounded N by Dunlop, NE by Neilston and Mearns in Renfrewshire, E by Fenwick, S by Dreghorn, SW by Irvine and Kilwinning, and W by Kilwinning. Its utmost length, from NE to SW, is 8⅞ miles; its breadth varies between 1¾ and 4½ miles; and its area is 21⅛ square miles or 13,667⅜ acres, of which 41⅛ are water. Annick Water flows through the parish from end to end, and receives the tribute of Glazert

and other burns. In the extreme SW, where Annick Water passes off from Stewarton, the surface declines to 150 feet above sea-level; and thence it rises north-eastward to 363 feet near Lainshaw, 404 at High Cross, 428 at Little Cutstraw, 526 at Gallowberry, 772 at Glenouther Rig, and 802 at the Renfrewshire border. It is thus comparatively high at the NE end, but gradually descends south-westward in a beautiful diversity of gentle eminences, fine slopes, and pleasant flats. Not a few of its heights, even though of little altitude in themselves, command gorgeous panoramic views of much diversity and of great extent. Trap rocks predominate in the north-eastern district, and rocks of the Carboniferous formation in the SW. Sandstone, limestone, and coal are worked; but the last exists only in very thin strata, and is used principally for calcining the limestone. The soil, for the most part, is fertile, and derives great benefit from the grass-fallow. Nearly 2700 acres are in tillage; about 7300 are disposed in arable grass land; 1300 are natural pasture; 2000 are moor or moss; and the rest is woodland, gardens, or roads. Natives were David Dale (1739-1806), the New LANARK manufacturer; and Robert Watt, M.D. (1774-1819), the compiler of the *Bibliotheca Britannica*. The principal antiquities are remains of two castles, once the seats of the Cunninghams of CORSEHILL and the Cunninghams of AUCHENHARVIE, both of them branches of the noble family of Kilmaurs. These are noticed separately, as also are the mansions of KENNOX, LAINSHAW, and ROBERTLAND. Four proprietors hold each an annual value of £500 and upwards. Stewarton is in the presbytery of Irvine and the synod of Glasgow and Ayr; the living is worth £400. The parish was anciently a vicarage under the monks of Kilwinning. On the lands of Lainshaw, at a place now called Chapel, and formerly called Chapelton, anciently stood a chapel dedicated to the Virgin. Two public schools, Kingsford and Stewarton, with respective accommodation for 93 and 538 children, had (1884) an average attendance of 63 and 495, and grants of £57, 2s. 6d. and £416, 18s. Valuation (1860) £19,616, (1885) £27,508, *plus* £2081 for railway. Pop. (1801) 2657, (1841) 4656, (1861) 4449, (1871) 4478, (1881) 4309.—*Ord. Sur.*, sh. 22, 1865.

Stewarton. See KIRKCOLM and WISHAW.

Stewarton, Inverness-shire. See CAMPBELTOWN.

Stinchar, The, a salmon and trout river of Carrick, Ayrshire. It rises on the eastern border of Barr parish, and runs 29¾ miles north-westward and west-south-westward, through or along the borders of Barr, Colmonell, and Ballantrae parishes, till it falls into the Irish Sea, in the vicinity of the village of Ballantrae. Its principal affluents are the Dhuisk and the Tig. Its current, for the most part, is clear, broad, and shallow; but is subject to sudden and violent freshets.—*Ord. Sur.*, shs. 8, 7, 1863.

Stirkoke House, a mansion in Wick parish, Caithness, 3½ miles W of the town. Its owner, Edward William Horne, Esq. (b. 1857; suc. 1874), holds 7117 acres in the shire, valued at £2477 per annum.—*Ord. Sur.*, sh. 116, 1878.

Stirling, a small parish, containing the royal burgh of the same name, in the NE of Stirlingshire, and extending also on the NE into a detached section of the county of Clackmannan. It is bounded N by the parish of Logie and a detached portion of St Ninians, and elsewhere by the parish of St Ninians. The shape is highly irregular, and the boundary, except where it lies along the Forth, almost entirely artificial. Beginning at the NW corner, opposite the old Toll House beyond Raploch, the line passes down the centre of the river to the Old Bridge of Stirling, zig-zags thence eastward to the river a little below Queenshaugh, and then passes up the river, till, about half way round the bend below the Old Bridge, it strikes due S to the Forth near the quay. From this it follows the river up to Ladyneuk, then winds eastward and along the course of a small rivulet back to the Forth once more near West Grange, and follows up the river to the bend E of the railway station. From this it twists very irregularly first SE and then back SW to the S side of the burgh of Stirling, and after skirting the S side of the King's Park, passes down the Mill Burn to the road at Raploch, and back along the road to the point on the river opposite the old Toll House. The portion in the loop of the Forth between Ladyneuk and the station is in Clackmannanshire and the rest in Stirlingshire. The former is the barony of Cambuskenneth, and was formerly a separate parish, but is now ecclesiastically in Stirling, though for poor law purposes it is included in Logie. Its area is 241 acres, of which 8¼ are foreshore and 32½ water; while the area of the Stirlingshire portion of the parish is 1271¾ acres, of which 12½ are foreshore and 46¾ water. The castle and park were, till the first half of the present century, excluded from the parish. The ground outside the town is mostly low and level, the highest point being in the King's Park, where a height of over 200 feet is reached. The castle ridge in the town is 420 feet. The soil on the low flats is a rich carse clay, and elsewhere it is a sharp friable earth. The underlying rocks are carboniferous, with masses of intrusive basalt. The parish is traversed by different sections of the Caledonian and North British railway systems, as well as by the main roads that radiate from the town.

Stirling was anciently in the diocese of St Andrews, but being comprehended within the archdeaconry of Lothian, it followed the fortunes of that district when it was in 1633 erected by Charles I. into the diocese of Edinburgh, the minister becoming one of the prebendaries of the cathedral church of St Giles. It is the seat of a presbytery in the synod of Perth and Stirling, and has three charges, with livings worth respectively £490, £250, and £200 a year. The churches are noticed in the following article. Under the landward school board, Abbey School, at Cambuskenneth, with accommodation for 48 scholars, had in 1884 an attendance of 42, and a grant of £35, 9s. The parishes of Stirling, St Ninians, and Kilsyth form a poor-law combination with a poorhouse at the N end of Stirling. There is accommodation for 200 inmates, and the average number in it is about 120. The village of RAPLOCH is separately noticed. Seven proprietors hold each an annual value of £500 and upwards, 107 hold each between £500 and £100, 113 hold each between £100 and £50, and there are a large number of smaller amount. Valuation, exclusive of the burgh (1884-85), £2435, 12s. 2d., of which £1629, 12s. 2d. was for the Stirlingshire portion. Pop. (1801) 5271, (1831) 8556, (1861) 11,714, (1871) 12,014, (1881) 13,480, of whom 7069 were females, and 217 were in Clackmannanshire. Houses (1881) 2823 inhabited, 191 uninhabited, and 90 being built.

The PRESBYTERY OF STIRLING comprehends the *quoad civilia* parishes of Airth, Alloa, Alva, Bothkennar, Clackmannan, Denny, Dollar, Gargunnock, Larbert, St Ninians, and Stirling; the *quoad sacra* parishes of Bannockburn, Bonnybridge, Haggs, Marykirk, Plean, and Sauchie, and mission stations at Alloa and Carronshore; the total number of charges being 21. The Free Church has a presbytery of Stirling, with charges at Alloa (2), Alva, Bannockburn, Cambusbarron, Clackmannan, Denny, Dollar, Dunipace, Larbert, St Ninians, Stirling (4), and Tullibody—in all 16. The United Presbyterian Church has also a presbytery of Stirling, with charges at Alloa, Alva, Bannockburn, Blairlogie, Bridge of Allan, Bridge of Teith, Bucklyvie, Clackmannan, Dollar, Dunblane, Greenloaning, St Ninians, Stirling (3), and Tillicoultry—in all, 16.

Stirling (old forms Strivelin, Striveling, Strivelyn, Strewelin, Sterling), a market town, a royal and parliamentary burgh, and the county town of Stirlingshire, occupying part of the parish just described, but having outlying suburbs extending into the parishes of St Ninians and Logie. Standing on the river Forth 16⅝ miles from its mouth opposite Kincardine, the town is connected with Leith by steamer, but in consequence of this having to accommodate itself to the tide, and owing also to the winding course of the river, there is but little river trade.

Stirling is, however, a railway centre, the joint line used by both the Caledonian and North British companies between Larbert Junction and Perth passing through it, and lines belonging to the latter company also branching off to the eastward through Fife, and westward along the valley of the Forth. It is by rail 7 miles W of Alloa, 10 NW of Falkirk, 13 W by S of Dollar, 24 W by S of Kinross, 29 NE of Glasgow, 30 ENE of Balloch on Loch Lomond, 33 SW of Perth, 36 WNW of Edinburgh, and 84 ESE of Oban. The town owes its origin to the well-known castle of Stirling, which holds such a prominent position in Scottish history. The castle occupies the summit of an isolated hill of intrusive basalt, which, springing abruptly from the valley of the Forth, presents a precipitous front to the NW, and slopes from this eastward. It has been often compared to the Acropolis at Athens, and bears a considerable resemblance to the long ridge of the old town of Edinburgh, extending from the Castle to Holyrood, but the ridge at Stirling is much shorter. The more modern districts of the town and the suburbs extend over the flatter ground around the base. The higher parts of the rock—particularly along the Back Walk, and still more in the Castle gardens NW of the Douglas Room and SW of the Palace—command very fine views. 'Who,' says Dr Macculloch, 'does not know Stirling's noble rock, rising, the monarch of the landscape, its majestic and picturesque towers, its splendid plain, its amphitheatre of mountain, and the windings of its marvellous river; and who that has once seen the sun descending here in all the blaze of its beauty beyond the purple hills of the west can ever forget the plain of Stirling, the endless charm of this wonderful scene, the wealth, the splendour, the variety, the majesty of all which here lies between earth and heaven.' The foreground is everywhere a rich alluvial plain, fertile, highly cultivated, and well wooded, with here and there an abrupt protruded hillock, starting abruptly from the flat, and relieving it from tameness. To the N and NE are the woods about Bridge of Allan and Dunblane, and the hill-screened vale of Allan Water, then the picturesque wood-crowned cliffs of Abbey Craig, and the soft pastoral slopes of the Ochils. To the E and SE are the fertile carses of Stirling and Falkirk, with the Forth winding her silvery course to the sea, and beyond, the distant hills of Fife and the Lothians; while to the SW is the termination of the Lennox Hills. To the W and NW are the flat valleys of the upper Forth and Teith with winding rivers and wooded policies, and shut in by the Campsie Fells, the Monteith Hills, the Braes of Doune, and behind and beyond, sweeping round from W to N, are a great semicircle of distant peaks, the most conspicuous of which are Ben Lomond (3192 feet), Ben Venue (2393), Ben A'an (1851), Ben Ledi (2875), Ben Voirlich (3224), and Uamh Mhor (Uam Var; 2179). 'Eastward from the castle ramparts,' says Alexander Smith, 'stretches a great plain bounded on either side by mountains, and before you the vast fertility dies into distance flat as the ocean when winds are asleep. It is through this plain that the Forth has drawn her glittering coils—a silvery entanglement of loops and links—a watery labyrinth—which Macneil has sung in no ignoble numbers, and which every summer the whole world flocks to see. Turn round, look in the opposite direction, and the aspect of the country has entirely changed. It undulates like a rolling sea. Heights swell up into the blackness of pines, and then sink away into valleys of fertile green. At your feet the Bridge of Allan sleeps in azure smoke—the most fashionable of all the Scottish *spas*, wherein, by hundreds of invalids, the last new novel is being diligently perused. Beyond are the classic woods of Keir; and ten miles further, what see you? A multitude of blue mountains climbing the heavens! The heart leaps up to greet them—the ramparts of the land of romance, from the mouths of whose glens broke of old the foray of the freebooter; and with a chief in front with banner and pibroch in the wind, the terror of the Highland war. Stirling, like a huge brooch, clasps Highlands and Lowlands together.'

History.—When the first fort or village was formed at Stirling must remain doubtful, for though the isolated position of the rock, and its nearness to what must always have been the principal ford along the lower part of the Forth, point it out as the natural key of the Highlands and an important strength, it is extremely difficult to say whether it was so occupied prior to and during the Roman times or not. Situated near the skirts of the great Caledonian Forest, and in the midst of a flat that must at that time have been, to a considerable extent, a marsh, we might expect to find it one of the strongholds of the Damnonii who inhabited the district, but Ptolemy places their chief town Alauna—not to be confounded with Alauna of the Gadeni—to the NW on the point at the junction of the Allan and the Forth. The Roman road from Camelon northward passed to the W of the Castle rock, and seems to have crossed the river close to this at a ford called the Drip; but whether the Romans had a camp on the high ground cannot be ascertained, though during the period when they held the district N of Antoninus' Wall they certainly seem to have had an outpost here. At least Sir Robert Sibbald, writing in the end of the 17th or the beginning of the 18th century, says that there was at that time on a stone on the brow of the hill overlooking Ballengeich Road, opposite the old gate of the Castle, an inscription '*In excu. agit. leg.* II.,' which has been extended into *In excubias agitantes legionis secundæ*, the suggested rendering being 'for the daily and nightly watch of the second legion.' The inscription was obliterated by the close of the 18th century, but a large boulder with a defaced inscription is still pointed out as 'the Roman Stone.' It is now marked by an iron rod. What the history of the place may have been from the 5th to the 10th century it is hardly possible to conjecture—probably that of any border fortress lying between two peoples who were often at war, and it is to this period that the modern name—the first part of which is said to be a word meaning strife, is supposed to be due; and hence also a name used by some of the chroniclers *Mons Dolorum*. Another name, used subsequently and referred to by Sir David Lindsay in his *Complaint of the Papingo* (1539), was Snawdon or Snowdoun, which Chalmers has derived from the British *Snuadun*, 'the fortified hill on the river.' According to Boece, followed by Buchanan, the Northumbrian princes, Osbrecht and Ella, in the 9th century subdued the whole country as far as Stirling, where they built a strong fort and also a bridge across the river, but the story is undoubtedly fabulous, for these princes were in reality rival claimants of the throne of Northumbria, and were, in 867, both slain in a battle against the Danes at York, the danger of the realm from the sea-rovers having compelled them to unite their forces. There certainly was war between Alban and Northumbria a century later, about 971 or 975, when, however, the attack was made from the Scottish side by Kenneth III., whom we find also, as a means of protection, fortifying the fords of the Forth, which was the boundary of his kingdom to the S, but no specific mention is made of Stirling.

By the 12th century, when the place finally emerges from its historic obscurity, it must have made considerable progress. Alexander I. died in the castle in 1124; David I., in a grant to the church of the Holy Trinity at Dunfermline between 1124 and 1127, speaks of his burgh of Stirling; in 1175 the castle must have been one of the five most important strengths in Scotland, for it was one of those selected to be held by English garrisons till the conditions under which Henry II. had released William the Lyon should be fulfilled; and William himself, after holding his last parliament here in 1214, and getting his son accepted as their future king by the bishops, earls, and barons, died in the Castle 'full of goodly days and at a good old age, fully armed with thorough devoutness, a clear shrift, true charity, the viaticum of Christ's body, and the rest

of the sacraments.' From this time onward the Castle became a favourite royal residence, and here Alexander II. is said to have been when he promulgated his law establishing trial by jury; and here John Baliol held the convention which, in 1295, agreed to the formation of an offensive and defensive league with France against England, and for the marriage of his son Edward with the daughter of the French King. On the approach of Edward I. with his army in 1296 the Castle was either abandoned or at once surrendered, only to be recaptured the following year, after the battle of Stirling Bridge. This was fought at the site of the earliest bridge that existed in the neighbourhood of Stirling, at Kildean, about five furlongs NW of Stirling Castle. Sibbald says that a bridge was built here by Agricola, but there does not seem to be any authority for the statement. That there was one at a very early date is, however, clear, for it is probable that this Kildean bridge is the one mentioned in the old laws printed at the beginning of the Record edition of the Scots Acts. It seems to have been formed by beams resting on stone pillars, remains of which were to be seen till about the end of the 18th century. In 1279, after the departure of Edward I. for Flanders, Wallace, having raised a large army in the districts N of the Tay, and got possession of all the strongholds there, was besieging Dundee when news arrived that the Earl of Surrey was pressing forward at the head of a large English army in order to attack him. He immediately advanced to the Forth, judging that to be the best position for receiving their attack; and took up his position along the loop of the Forth in front of the Abbey Craig, where the massive tower reared to his memory now stands. Terms offered by the English leaders having been rejected, they advanced to the attack. A proposal that a portion of the army should cross by the neighbouring ford was not acted on, and the whole line began to advance by the bridge, which was so narrow that only two persons could pass abreast. When about half of the English force had crossed, a body of spearmen, sent by Wallace for the purpose, dashing suddenly forward, gained and took possession of the end of the bridge, and Surrey and the rest of his forces had to stand helplessly by and see their comrades who had crossed attacked and routed by the Scottish army. Only a few were able again to cross the river in safety, and the body that had not crossed retired in great disorder. Blind Harry accounts for the severance of the two portions of the English army somewhat differently. After recording Wallace's intention—

> 'Bot ner the bryg my purposs is to be
> And wyrk for thaim sum suttell jeperté;

he goes on to tell how

> 'On Setterday on to the bryg thai raid,
> Off gud playne burd was weill and junctly maid:
> Gert wachis wait that nane suld fra thaim pass.
> A wricht he tuk, the suttellast at thar was,
> And ordand him to saw the burd in twa,
> Be the myd streit, that nane mycht our it ga;
> On charnaill bandis nald it full fast and sone,
> Syne fyld with clay as na thing had beyne done.
> The tothir end he ordand for to be,
> How it suld stand on thre rowaris off tre,
> Quhen ane war out, that the laiff doun suld fall;
> Him selff wndyr he ordand thar with all,
> Bownd on the trest in a creddill to sit,
> To louss the pyn quhen Wallace leit him wit.
> Bot with a horn, quhen it was tyme to be,
> In all the ost suld no man blaw bot he.'

And so when Wallace blew his horn, part of the bridge fell. The cognomen of 'Pin' Wright was given to the man who undertook to 'louss the pyn;' and a descendant who now lives in Stirling still bears the name, the family having for their coat of arms a carpenter's axe, the crest being a mailed arm grasping an axe, and the motto *Tam arte quam marte*.

Between this and 1303 the Castle seems to have changed hands several times, but when Edward I. commenced his great invasion in the year just mentioned, it was held by a Scottish garrison. So strong did Edward deem the position that he passed it by when he went north, and did not turn his attention to it till 'all magnates but William Wallace had made their submission unto him, and all castles and towns—except Strivelyn Castle and the warden thereof—were surrendered unto him.' After keeping lent at St Andrews, and holding a parliament at which Sir William Wallace, Sir Simon Frazer, and the garrison of Stirling Castle, were outlawed, he began at Easter 1304 the siege which is memorable for the determination with which the small garrison of less than 200 men held, for more than three months, against the whole English army, this the last spot of ground that was not in the hands of the foreign foe. The Castle seems to have been partly rebuilt, not long before, on the Norman model, and here not only did the strength of the masonry offer stout resistance to the battering machines of the besiegers, but there was the additional difficulty of the steep rock on which the Castle stood. Some of the machines threw very heavy stones, and one is mentioned as being able to hurl against the walls blocks weighing from two to three hundredweights. King Edward himself, though sixty-five years old, was in the midst of the work. 'He was,' says Dr Burton, 'repeatedly hit, and the chronicles record with reverence the miraculous interventions for his preservation. On one occasion Satan had instigated one of the Scots to draw an arblast and aim an arrow against the Lord's anointed, who was riding exposed in the front. A devil's angel sped the shaft in so far that it pierced a chink of the mail, but then one of heaven's angels came to the rescue and stopped it from penetrating the sacred body of the conquering king—for it is curious to observe, that it is all along not from the justice or holiness of his cause, but from his success as a conqueror that these chroniclers treat his cause as a holy one, and denounce the resistance it met with as unholy rebellion. Stronger evidence still of his fixed determination to leave no means untried for the reduction of the Castle is his bringing the lead from the roofs of churches and religious houses in St Andrews and Brechin to be made into weights in working the siege engines.' He was a superstitious man, and knew that this was sacrilege, but he gave orders that no altar was to be uncovered, and by-and-by, when he had attained his object, payment was made to the Bishop of Brechin and the Prior of St Andrews 'pro plumbo quod dextrahi fecimus tam de ecclesiis quam de aliis domibus ipsorum Episcopi et Prioris apud Breghyn et Sanctum Andream.' When Sir William Oliphant and his garrison were at last driven by famine to surrender, they numbered only 140. From this time the Castle remained in the hands of the English till 1314, when it was surrendered the day after the battle of Bannockburn. In 1333 it was taken by Baliol's party, and though it was besieged in 1336 and again in 1337 by Sir Andrew Moray, it was on both occasions relieved by the English, and did not fall into the hands of David Bruce's friends till 1339. In 1360 Sir Robert Erskine was appointed governor of the Castle by King David, and besides ample allowances for the maintenance of the garrison, obtained a grant of all the feus and revenues in Stirlingshire belonging to the Crown, with the wardships, escheats, and other emoluments annexed to them. This office was hereditary in the Erskine family till the forfeiture of the Earl of Mar in 1715. During the times of Robert II. and Robert III., though the Castle was occasionally the royal residence, there is but little mention of it otherwise.

The warlike operations of the 13th and the beginning of the 14th centuries were by no means in favour of the burgh, for after it had been accidentally destroyed by fire in 1244, it was again burnt in 1298 by Wallace on his retreat from Falkirk, so that it might not afford shelter to the English. It was also burned in 1385 by Richard II., and though its losses were partly compensated by the grants to the burgesses by Robert II. of fishings and petty customs, it was not till the time of James I. that it may be said to have fairly started in its course of progress. The Castle was the birthplace of James II., and after the murder of his

father it afforded a place of refuge for him and his mother against the ambitious designs of Sir William Crichton. Subsequently, in 1452, one of the rooms in the Castle was the scene of the murder of the Earl of Douglas, who, having come to Stirling at the King's command and with a royal safe-conduct, and having been 'well received and entertained by the king, who thereafter called him to the supper, and banquetted him very royally,' yet haughtily refused to break the agreements that he had entered into with the Earls of Crawford and Ross. He even retaliated and 'reproached the king very arrogantly,' so that at last the royal patience gave way, and James 'took a high anger and thought to do the thing that was less skaith to the commonwealth than to trouble the whole realm therewith; and so he pulled forth a sword, and said, "I see well, my lord, my prayer cannot prevail to cause you desist from your wicked counsel and enterprizes, I shall cause all your wicked conspiracies to cease." Thereafter immediately he struck him through the body with the sword; and thereafter the guard, hearing the tumult within the chamber, rushed in and slew the earl out of hand.' The Earl's brother and many of his friends were in the town, and as they were unable to revenge themselves on the king, they wreaked their wrath on the burgesses, which was hardly fair. The Earl's brother 'made a long harangue and exhortation to his friends to siege the Castle and to revenge the unworthy slaughter of his brother with the king's life. But when they saw it was impossible to do, seeing they had no munition fitting for this effect, the Castle being so strong, they gave the king very contumelious words, saying, "that they should never obey nor know him again as a king or prince, but should be revenged upon him and his cruel tyranny or ever they ceased." After this they burned and herried the town of Stirling.' James III. found its retirement congenial to his artistic tastes, and made the Castle his chief residence, while it was also a favourite residence of James IV., who is said to have done penance in the neighbouring church of the Franciscans for the share he had taken in the insurrection that ended with his father's death. James V. was born at Stirling and also crowned there, and the Castle afforded him a place of refuge when he escaped from the power of the Douglases in 1528, and the pass to the NE of it furnished him with the name he so often adopted in his wild *incognito* rambles and adventures among his people—the Gudeman of Ballengeich. His infant daughter Mary and her mother were brought here in 1543,—Stirling being deemed a safer place than Edinburgh or Linlithgow, on account of its nearness to the Highlands,—and here the infant queen was crowned when scarcely nine months old, the Regent Arran carrying the crown and Lennox the sceptre; and the Estates fixed the Castle as the royal residence for the time being. In the early times of the Reformation it became, in consequence, one of the centres of the influence of Mary of Guise, who was here when the news came of the first outbreak of popular fury at Perth against the Roman Catholic Church in 1559. Later she intended to garrison the place with French soldiers, but was prevented by the Earl of Argyll, Lord James Stewart, and the other Lords of the Congregation, who 'reformed Stirling' in the usual manner, and also entered there into their third bond of mutual adherence and defence. Stirling is closely associated with many of the important events of Mary's reign after her return from France. In 1561 'her grace's devout chaplains would, by the good device of Arthur Erskine, have sung a high mass,' but 'the Earl of Argyle and the Lord James so disturbed the quire, that some, both priests and clerks, left their places with broken heads and bloody ears.' It was here that the special council was held at which she announced her intended marriage with Lord Darnley, and here her infant son, afterwards James VI., was baptized with great pomp in December 1566, the Privy Council levying a sum of £12,000 to defray the expense, the large amount being necessary from the fact that 'sum of the grettest princes in Christendome hes ernestlie requirit of our soveranis that be thair ambassatouris thai may be witnessis and gosseppis at the baptisme of thair Majesteis derrist sone.' Queen Elizabeth, who was godmother, sent a gold font weighing 333 ounces, which her ambassador was told to 'say pleasantly was made as soon as we heard of the prince's birth, and then 'twas big enough for him; but now he, being grown, is too big for it; therefore it may be better used for the next child, provided it be christened before it outgrows the font.' The Countess of Argyll represented the English Queen, and as the ceremony was a Roman Catholic one, and the countess was a member of the Reformed Church, she came under the displeasure of the General Assembly of 1567, which ordered her to make public repentance in the Chapel Royal of Stirling—the place of her offence—'upon ane Sunday in time of preaching, for assisting at the prince's baptism, performed in a papistical manner.' In the following year, Mary having abdicated, James was crowned here, and the Castle remained his residence for the first thirteen years of his life, and was the meeting-place of the parliaments convened by the various regents as well as the scene of several other incidents connected with the struggles for power going on at the time. In May 1569 four priests of Dunblane, who had been sentenced to be hanged at Stirling for saying mass contrary to act of parliament, had their punishment commuted, and were instead chained to the market-cross wearing their vestments, and after they had stood thus for an hour, while the mob pelted them with stones and offered them other indignities, they were loosed, but their vestments, books, and chalices were burned by the hangman. During part of the regency of Lennox the Court of Session sat here, as also did the General Assembly in 1571 and 1578. In the former year also, Stirling was the scene of the execution of John Hamilton, Archbishop of St Andrews, who was captured at Dumbarton Castle early in the year, and hanged at the common place of execution at the market-place of Stirling shortly afterwards on charges of being accessory to the murders of Darnley and the Regent Murray, and of conspiring against King James. In the same year too, while a parliament, summoned by Lennox—contemptuously styled by its opponents the Black Parliament—was sitting, a number of Queen Mary's supporters who had been threatened with forfeiture, sent a party of horsemen, led by Kirkaldy of Grange, from Edinburgh by night, to attempt to surprise and seize a number of the nobles attending the parliament. Reaching the town before daybreak, they surrounded the houses where the leading men were lodged, and meeting with no resistance except from Morton, who would not surrender till his house had been set on fire, they started on their return to Edinburgh, carrying off Regent Lennox and ten other noblemen as prisoners. Some of the followers of Scott of Buccleuch having, however, stayed behind for the purpose of plundering, caused an alarm in the Castle; and the Earl of Mar, marching out with a body of soldiers, soon not only put the plunderers to flight, but, having aroused the townsmen, pursued the main body so hotly that all the prisoners were rescued, the Regent being, however, mortally injured in the struggle. In 1578 the first parliament convened by James VI., after he nominally took the government into his own hands, met in the hall of the Castle; but the place of meeting was so displeasing to the party opposed to Morton—who maintained 'that a meeting of the Estates held within a fortress commanded by an enemy of his country was no free parliament'—that its choice almost led to civil war. After a great reconciliation banquet given subsequently in the Castle, the Earl of Athole died suddenly, and it was asserted that he had been poisoned. In 1584 the Earls of Angus and Mar, the Master of Glamis, and others of the Ruthven party, seized the Castle; but being unable to hold it against the force raised by the Earl of Arran, they retired to the Highlands, and finally fled to England, only, however, to return in 1585, when, in the Raid of Stirling, they took possession of the place, where James

was himself residing at the time, and procured from the king a reversal of their own forfeitures and the restoration of the Gowrie family to their vast estates. In 1594 the town witnessed the greatest pageant that it ever saw, or probably ever will see, at the baptism of Prince Henry, the eldest son of James VI. 'The noble and most potent prince of Scotland was born in the castle of Striviling, the 19 day of February 1594, upon which occasion the King's majestie sent for the nobles of his land, and to all the capitall burrows thereof, . . . and proposed unto them that it was necessary to direct out ambassadours to France, England, Denmark, the Low Countries, the Duke of Brunswicke, his brother-in-law, and to the Duke of Magdelburg, the queenis majestie's grandfather, and to such other princes as should be thought expedient. Likewise he thought the castle of Striviling the most convenient place for the residence of this most noble and mightie prince, in respect that he was borne there; as also, it was necessary, that sufficient preparation might be made for the ambassadours that should be invited to come, for honour of the crown and countrey. And besides all this, because the Chapell Royal was ruinous and too little, concluded that the old chapell should be utterly rased, and a new erected in the same place, that should be more large, long, and glorious, to entertain the great number of straungers expected. These propositions at length considered, they all, with a free voluntarie deliberation, graunted unto his majestie the summe of an hundred thousand pounds money of Scotland.' And so the new chapel was built by the 'greatest number of skilled workmen,' James himself superintending; and the ceiling was adorned with gold, and the walls decorated with paintings and sculpture. During the two days before the baptism, which took place on 30 Aug., sports were held in 'The Valley.' After all the pompous ceremonial of the baptism, which was too long to be here minutely detailed, a banquet took place in the Parliament House, where 'the kinge, queene, and ambassadours were placed all at one table, being formed of three parts, after a geometricall figure, in such sort that every one might have a full sight of the other.' During the progress of the feast, a triumphal car, seemingly drawn by a Moorish slave, entered, full of fruits and delicacies, which were distributed among the guests by six damsels clothed in satin and glittering with gold and silver. Thereafter there entered a boat eighteen feet in length, placed on wheels and moved by invisible springs. The masts, which were forty feet high, were red, the ropes of red silk, and the blocks were of gold. The sails were of white taffety, and the anchors were tipped with silver. She was loaded with sweetmeats, and on board were Neptune, Thetis, Arion, and Triton, while three syrens floated in the artificial sea that surrounded the vessel.

In 1637 the meetings of the privy council and of the Court of Session were held at Stirling for several months in consequence of the disturbed state of Edinburgh arising out of the attempted introduction of the liturgy. In 1645 the plague raged in the town from the middle of July till October, and obliged the parliament which had been already driven by it from Edinburgh to adjourn to Perth. During this time the meetings of town council are said to have been held in the Cow Park. In the same year the opposing armies of Montrose and Baillie passed the Forth at Kildean ford on their way to Kilsyth, but they seem both to have avoided the town in consequence of the plague. The Castle was held for the Covenanters. In 1648 the Highland followers of the Marquis of Argyll on their way to join the forces being assembled by the anti-royalist minority of the Estates were attacked and defeated by a portion of the Duke of Hamilton's army under Sir George Munro. Stirling was the rallying point of the force defeated by Cromwell at Dunbar, and afforded at that time a place of refuge for the Committees of Church and State, and the magistrates of Edinburgh who endeavoured to concert a plan of future operations, while at the same time a parliament—afterwards adjourned to Perth, and the last in Scotland at which the sovereign personally presided—was held; and it was thence that Charles II. started in 1651 for the march into England that terminated at the disastrous battle of Worcester. In 1651 the Castle was besieged and reduced by Monk, and the national records, which had been lodged here for safety, were seized and sent to London. At the time of the Union it was declared one of the four Scottish fortresses which were to be ever afterwards kept in repair, and in 1715 it afforded valuable support to the small force with which Argyll held the passage of the Forth against Mar and the Jacobites. In the subsequent rebellion in 1745-46, though the town wall had been repaired in the former year, the inhabitants made no resistance to the Highland army on its retreat, but having sent all their arms into the Castle, and obtained a promise that no man's person should be injured, and all articles required should be paid for, admitted the Jacobites within the town, when they kept their pledge so well that within two hours they had plundered the houses and shops of all the leading inhabitants opposed to their cause. They began to besiege the Castle, but though General Hawley's effort to cause them to raise the siege failed in consequence of the disaster at Falkirk, the attack was made in vain, and was hurriedly abandoned on the approach of the Duke of Cumberland's army. The only other historical event of general note connected with the town is the execution of Andrew Hardie and John Baird, who were in 1820 beheaded in front of the Town House for high treason, they having been two of the leaders of the Radical rising at Bonnymuir. The Highland and Agricultural Society's Show has been held here in 1833, 1864, 1873, 1881.

The last sovereign who resided in the Castle was James VI., but in 1681 the Duke of York, afterwards James VII., was here with his family, including Princess —afterwards Queen—Anne; and in September 1842 the Queen and the Prince Consort were here on their way from Taymouth to Dalkeith, on which occasion her Majesty was presented with the silver keys of the burgh in due form and the Prince Consort was made a burgess. The Prince of Wales visited the town in 1859. Stirling gave successively the title of Viscount and Earl to the family of Alexander of Menstrie and Tullibody, William Alexander having in 1630 been created by Charles I. Viscount Stirling and Baron Alexander of Tullibody, and in 1633 he became Earl of Stirling and Viscount Canada. The title became dormant at the death of Henry V., Earl in 1739, but there are still claimants. The only distinguished native of Stirling may be said to be Dr John Moore (1730-1802), author of *Zeluco* and other works now forgotten, and father of General Sir John Moore; but of those connected with the place by residence, besides the historical characters already spoken of, we may here mention George Buchanan (1506-82), who was tutor to James VI. during his early residence at the Castle; the Rev. Patrick Simpson, one of the ministers, who about 1600 published a History of the Church; the Rev. Henry Guthrie (1600-76), another of the ministers, author of *Memoirs of Scotch Affairs from* 1637 *to* 1649; the Rev. James Guthrie, his successor, one of the leading Remonstrants, who was executed in Edinburgh in 1661; Lieutenant-Colonel John Blackader (1664-1729), deputy-governor of Stirling Castle; the Rev. Ebenezer Erskine (1680-1754), one of the founders of the Secession Church; Dr David Doig (1718-1800), rector of the grammar school, a literary opponent of Lord Kames, whom Burns, who met him while at Stirling in 1787, describes as 'a queerish figure and something of a pedant;' and the Rev. John Russel (1740-1817), the 'Black Russel' of *The Holy Fair*, who was translated from Kilmarnock to Stirling in 1800, and who is buried in the old churchyard.

Lines of Street, etc.—The Castle Hill proper and some other heights associated with it form a triangular group to the NW of the town, the apex of the triangle being to the W, and the rock occupied by the Castle buildings and the Esplanade in front lying along the SW side.

Along the NE side of the Castle Rock is the deep hollow known as Ballengeich, and beyond this is the undulating height known as Gowling or Gowan Hill. This was the site of one of the Jacobite batteries during the siege of the Castle in 1746. Near the N corner is the rounded grassy summit called the Mote Hill or Heading Hill, the

> 'sad and fatal mound!
> That oft hast heard the death-axe sound,
> As on the noblest of the land
> Fell the stern headsman's bloody hand.'

It was the scene of the execution of the Duke of Albany, his two sons, and his father-in-law, the Earl of Lennox, in 1425; and as the Castle and Braes of Doune are visible from it, Albany's last glance must have been over his own wide domain. It seems to have been here also that in 1437 Sir Robert Graham and those of his associates in the murder of James I. who were executed at Stirling had an end put to their torments. The Mote Hill is known locally as Hurly-Haaky, a name said to be derived from an amusement indulged in here by James V. when he was young, and alluded to by Sir David Lindsay, who says

> 'Some harlit hym to the Hurlie-Hackit.'

It seems to have consisted in sliding down a steep bank in some sort of sleigh. Sir Walter Scott says the Edinburgh boys in the beginning of the present century indulged in such a game on the Calton Hill, 'using for their seat a horse's skull;' and as hawky or haaky is a Scottish word meaning a cow, it is possible that a cow's skull may have been used formerly for the same purpose. All this tract of ground is now open to the public, and walks beginning here extend round the base of the Castle Rock and along the wooded slopes to the SW of the old town, the principal path in this latter portion being the Back Walk with its fine trees. It was laid out in 1724 at the instigation of William Edmonstone of Cambuswallace. To the S of the Esplanade, and between it and the NW end of this walk, is a flat-bottomed hollow now occupied by part of the cemetery, but known particularly as 'The Valley,' and said to have been the ground used for tournaments and sports in the time of the Stewart Kings. A rocky eminence on the S side, called The Ladies' Rock, is traditionally the spot whence the ladies of the Court surveyed the feats of strength and skill. To the SW of this were the Royal Gardens or Haining, now simply laid out in grass, and with but few traces of the terraces and canal that once existed, though in this respect the Government have in recent years caused considerable improvement to be made. The canal seems to have been near the line of the modern Dumbarton Road. Near the extreme SW side of the gardens is an octagonal earthen mound with terraces and a depressed centre known as the King's Knot, and probably the place where the old game called The Round Table was played. The older name of the mound seems to have been also The Round Table, and it must have been here from a very early date, for Barbour speaks of King Edward and some of his followers who had in vain sought refuge at Stirling Castle after the battle of Bannockburn going

> 'Rycht by the Round Table away;'

so that it must have been there in his time; and Sir David Lindsay, in his *Farewell of the Papingo* (1539), also mentions it:—

> 'Adew fair Snawdoun, with thy towris hie,
> Thy Chapill Royall, Park, and Tabill Round.
> May, June, and July wald I dwell in thee,
> War I ane man, to heir the birdis sound
> Quhilk doth agane thy Royall Rocke resound.'

To the S of the Knot is the King's Park, 2 miles in circumference, which was in the time of the Stewarts stocked with deer and partially wooded. It is now a stretch of fine sward used as a drill ground and public park. It was here that Argyll's army was encamped in 1715. From the higher part of the ground to the W there are excellent views. The racecourse in the north-eastern part was formed in comparatively modern times, but has been disused for a considerable period.

The old town of Stirling, with its narrow and winding streets, lies along the ridge to the SE of the Castle. To the NE of the Esplanade are Upper and Lower Castle Hill and Barn Road, the former turning southward to Broad Street, at the E end of which St Mary's Wynd passes off to the N, while Bow Street on the S leads into Baker Street, the line of which eastward is continued by King Street. Parallel to Broad Street but farther to the S is St John Street, which is continued eastward by the very narrow Spittal Street, the latter, which is parallel to Baker Street, entering King Street near the centre of the S side. Running in the same line, from SE to NW, but on the opposite side of the ridge, is the Back Walk already mentioned; and passing northward from the E end of Baker Street is Blackfriars Street. The N and S line of streets begins at the E end of King Street, that leading to the N being Port Street. The part of the town just mentioned may be taken as that included within the precinct of the old town-wall, but there are now very extensive suburbs extending to the N and E, and S and SW. King Street is wide and well built, and its neighbourhood may be taken as constituting the business centre of the town, and Broad Street is also spacious; but the others present a curious mingling of modern and antique—houses of all ages, from the 15th century downwards, being to be found. The road to Airth passes off from the E side of Port Street, and along it is the small suburb known as The Craigs. The line of Port Street is continued to the S by Melville Place and Pitt Terrace, with a line of fine old trees along each side; and beyond these the road leads on to the villages of Newhouse, Belfield, and St Ninians, all of which are included within the parliamentary boundary. Between Melville Terrace and Newhouse on the W side of the road is Randolph Field, the traditional scene of Randolph's victory over the English cavalry under Sir Robert Clifford, who attempted to relieve Stirling Castle the day before the battle of Bannockburn. The line of Airth Road across Port Street is continued westward by the broad open Albert Place leading onward to Dumbarton Road. Albert Place, and the whole district between this and Melville Terrace, are occupied by villa residences, the principal thoroughfares being Abercromby Place, Clarendon Place, Victoria Place, Park Terrace, Snowdon Place, Drummond Place, Southfield Terrace, Gladstone Place, Glebe Crescent, and Allan Park.

From St Mary's Wynd, already mentioned, a line of newer streets passes northwards by Upper Bridge Street and Lower Bridge Street to the Old Bridge of Stirling; and from Lower Bridge Street a road passes round the end of the Heading Hill, and on west-north-westward to Callander. From the S end of the same street, Union Street passes NE to the Bridge of Stirling; while from the N end of Upper Bridge Street there is a line of thoroughfare—with the successive names of Cowane Street, Barnton Place, and Murray Place—southward to Port Street. From Barnton Place, Queen Street and the narrow Irvine Place lead north-westward to Upper Bridge Street and St Mary's Wynd, and at its N end Wallace Street strikes off northward to the Bridge of Stirling. Off Murray Place, near the centre of the E side, a short street leads to the railway station, and at the N end Shore Road branches off north-eastwards to the steamboat quay at the river. Most of these streets are wide, well-built thoroughfares, with minor streets passing off from them. The town of Stirling proper, from the Old Bridge on the N to Randolph Field on the S, extends over a distance of 1¼ mile; and from the King's Knot east-south-eastward to beyond The Craigs, the distance is ⅝ mile. The length of the parliamentary burgh, however—which extends from the Forth below Kildean southward to beyond the village of St Ninians—is 3 miles; and the breadth at right angles to this most of the way, except on the extreme S, where it tapers to a point, is ⅝ mile. As might be expected in the case of the town recognised as the key of the High-

lands, Stirling seems to have been well protected by a wall and ditch all round, except on the NW, where the Castle works were considered a sufficient defence. Part of the wall still remains at the E end of the Back Walk; and Port Street gets its name from the old South or Borough Port or gate which was originally at a point in the wall about 100 yards W of the line of the present street. After the extension of the town to the E in 1591, a new gate was formed farther to the E, but it was removed about the middle of last century, in order to render the access to the town from the S more convenient. The road to the N was by St Mary's Wynd, leading to the Old Bridge. The early recognition of the value of the fords at Stirling, as affording a direct passage to the N of Scotland, has been already noticed, as has also the first bridge at Kildean, where the battle of Stirling Bridge took place. The present Old Bridge is fully 1 mile to the ESE of this; and though the date of its erection is unknown, it must, judging by its style, have been built about the end of the 13th or the beginning of the 14th century. It has four arches, and is narrow and high in the centre. It had formerly two low towers at the centre, and two small flanking towers and iron gates at each end. In 1745 the south arch was destroyed by General Blakeney, governor of the Castle, in order to embarass the Jacobite army; and when the Duke of Cumberland's forces passed northward in the following year they were delayed here till the damage was roughly repaired. About a hundred yards farther down the river is the wider and more convenient modern bridge, erected in 1831, from designs by Robert Stevenson, at a cost of £17,000; and about the same distance farther down still are the viaducts, crossed by the main line of the Caledonian railway and by the Stirling and Dunfermline branch of the North British system.

The Castle, etc.—The Castle is approached by Broad Street and Mar Place, which lead to the spacious Esplanade or parade-ground, on the NE side of which is a gigantic statue of King Robert Bruce, erected in 1877 on a spot from which are visible the fields of Stirling Bridge and Bannockburn. The statue, which is 11 feet high, and represents the king in chain armour looking towards Bannockburn as he sheathes his sword, was executed by Currie. The entrance to the Castle is in the centre of the curtain wall at the NW end of the Esplanade, the outer wall being protected by a ditch with a drawbridge. The inner ditch and entrance are commanded by the Overport Battery, while the bomb-proof structure on the left, known as Queen Anne's Battery, with the adjacent unfinished works, was erected in Queen Anne's reign—whence the name—when the Castle was enlarged. The Queen's initials and the date, 'A. R. 1794,' may be seen on the second arch. To the N are the gun sheds, and adjoining them on the NE is the Spur or French or Ten-gun Battery, built by the French engineers of Mary of Guise in 1559, and overlooking Ballengeich and the Gowan Hill. At the SW end of the gun sheds is the old entrance, with two towers—not now so high as they formerly were—and a flagstaff. To the left of it is the Princes Walk, and inside the entrance is the open space called the Lower Square, on the NE side of which is the Grand Battery, while to the left is the Palace. This building, commenced by James V. and finished by Queen Mary, surrounds a central quadrangular court, and is very fantastic in its architecture—the N, E, and S sides having five or six curious pillars, formed by emblematic figures standing on carved balustrade columns, with pediments supported by grotesque figures. All the statues are much defaced, but those on the E side, which is the most richly—or wildly—ornamented, are supposed to represent Diana, Venus, Omphale, Perseus, and other mythological personages. Those on the N side include figures of James V. and his daughter, and one showing Cleopatra with the asp on her breast. The statue of James represents him with a bushy beard and wearing a hat. Over him is an allegorical personage holding a crown and a scroll with the kingly title; and he is attended by a royal lion and a cup-bearer, the former crouching at his feet, and the latter a beardless youth holding forth a cup. In the small interior square is the Lion's Den, said to have been the place where lions were kept for the royal amusement. Defoe waxes quite eloquent in praise of this building: 'King *James* the Fifth,' he says, 'also built a noble Palace here, adorn'd without with Pillars finely engrav'd, and Statues as big as the Life at the Top and Bottom. In this Palace is one Apartment of Six Rooms of State, the noblest I ever saw in *Europe*, both in Heighth, Length and Breadth: And for the Fineness of the Carv'd Work, in Wainscot and on the Cieling, there's no Apartment in *Windsor* or *Hampton-Court* that comes near it. And at the Top of this Royal Apartment, the late Earl of *Mar*, when he was Governor, made a very convenient Apartment of a Dozen Rooms of a Floor, for the Governors to lodge in. Joining to the Royal Apartments aforemention'd, is the Great Hall of Audience, roof'd at the Top with *Irish* Oak like that of *Westminster-Hall* at *London:* And in the Roof of the Presence-Chamber, are carv'd the Heads of the Kings and Queens of *Scotland.*' Though Defoe's description is not quite clear, it is evident that the latter part of it refers not to the palace but to the Parliament Hall mentioned below, The oak carvings of the heads of the kings and queens, known as 'the Stirling heads,' were taken down in 1777, as they had become insecure, and one of them had fallen on the head of a soldier. The burgh prison afforded them a place of refuge during 40 years of subsequent neglect, and since then they have been scattered. A few are preserved in the Smith Institute. The spacious rooms of the palace itself have since Defoe's time also suffered badly, some of them having been partitioned off as barrack stores, and the others for similar purposes.

To the N of the Palace is the Upper Square, the S side of which is formed by the Palace itself. On the E side is the Parliament Hall or Parliament House, erected by James III. It was originally a fine building, the hall proper having been 120 feet in length, but it has, like the other buildings, suffered greatly by being converted into barrack rooms. On the N side of the square is the building erected by James VI. as a chapel, but used as a store, and generally called the Armoury. It at one time contained 15,000 stand of arms and many pieces of old armour, but most of these have now been removed to the Tower of London. There seems to have been a chapel in the Castle founded by Alexander I., and attached to the monastery at Dunfermline, and the *Capella Castelli de Strivelin* is mentioned in a deed of David I. (1124-53), and in another in the reign of William the Lyon (1165-1214). What the original dedication was is unknown, as the earlier documents mention only the King's Chapel, but in the 14th century, perhaps earlier, there is mention of the chapel of St Michael, which may probably date from the time when St Malachi or Michael—the Irish ecclesiastic—visited David I. at Stirling Castle and healed his son Prince Henry. The chapel was rebuilt in the early part of the 15th century, but it was not till the time of James III. that it became a foundation of importance. That monarch seems to have added to his other artistic tastes a great love of music, and this led him to determine that St Michael's Chapel should be rebuilt and constituted both as a royal chapel and as a musical college, and in the High Treasurer's accounts for 1473 and 1474 we find a number of entries of expenses in connection with the new building. He also endowed the new foundation with the rich temporalities of the Abbey of Coldingham, the annexation of which interfered with the interests of the powerful family of Home, and so led to the downfall and death of James himself. The chapel thus erected was the scene of the penitence of James IV., who, after the victory at Sauchie, 'daily passed to the Chapel Royal, and heard matins and evening-song; in the which every day the chaplains prayed for the king's grace, deploring and lamenting the death of his father; which moved the king, in Stirling, to repentance, that he happened

to be counselled to come against his father in battle, where-through he was murdered and slain. To that effect he was moved to pass to the dean of the said Chapel Royal, and to have his counsel how he might be satisfied, in his own conscience, of the art and part of the cruel deed which was done to his father. The dean, being a godly man, gave the king a good comfort; and seeing him in repentance, was very glad thereof.' Whether from this penitence or from a devotion to music itself, James IV. carried out his father's purposes, and endowed the foundation with large revenues. The deans of the chapel, who were first the provosts of Kirkheugh at St Andrews, afterwards the bishops of Galloway, and eventually the bishops of Dunblane, possessed in their capacity as deans an episcopal jurisdiction, and in 1501 the chapel was erected into a collegiate church. The chapel erected by James III. seems, however, to have been a poor structure, for in 1583 mention is made that 'the thak thairof resavis weit and rane in sic sort that the Kingis hieness may nocht weill remane within the same in tyme of weitt or rane,' and as 'the ruif thairof hes bene wrang wrocht mekil under square that the thak of the same is aff skailze, and is ane werray licht thak,' and as there are 'many kyppillis thairof broken, swa it is necessar to put ane new ruif upone the said Chapell,' and so on, the whole structure being evidently in very ruinous condition. Nothing was, however, done till 1594, when James VI. pulled the old building down and erected on its site the very poor erection now standing, which was the scene of the baptism of Prince Henry. It was subsequently destroyed internally by being converted into an armoury. It is to be hoped that the singularly inappropriate use to which the old portions of the Castles of Stirling and Edinburgh are put, may finally cease and determine under the regime of the coming Secretary of State for Scotland. The buildings on the SW side of the Upper Square are partly older in date than the others, some of them having been erected in the end of the reign of James I. They are now used as officers' quarters and offices, the officers' mess-room being what is known as Queen Mary's Boudoir. Over the gable window are the letters M. R., with a crown and thistle, and over another window the monogram M. R., with the date 1557. A passage to the W of the Chapel Royal leads to a garden opening off which is the Douglas Room or King's Closet, the reputed scene of the murder of the Earl of Douglas by James II. The skeleton of an armed man found in the garden in 1797 is supposed to have been that of Douglas. This portion of the Castle was destroyed by fire in 1855, but was, in 1856, restored from designs by R. W. Billings, in keeping with the old design. In the small closet opening off the room is a stained-glass window with the Douglas arms and the motto, 'Lock Sicker.' A small door opening off at one side leads to an underground passage, which is supposed to have come out at Ballengeich. Round the cornice of the closet is the inscription: *Pie Jesus Hominum Salvator Pia Maria Salvete Regem*, and beneath, *Jacobus Scotor. Rex.* In the Douglas Room itself may be seen the communion table used in the Castle by John Knox, an old pulpit from the Chapel Royal, an old clock from Linlithgow, several personal relics of the Stewart sovereigns, and a number of pikes used at the Bonnymuir rising in 1820. From the ramparts on the N side of the garden there is a magnificent view. The best is from what is called Queen Victoria's Look-out at the NW corner—though the Queen saw but little when she was there as the day was misty—but good views may also be obtained from Queen Mary's Look-out on the W, and from the Ladies' Look-out Battery SW of the Palace, where the rock is steepest. To the N of the buildings just described, but at a lower level, is a rampart-protected plateau on which are the magazines. The Castle is now used as an infantry barracks, forming the head-quarters of the 91st regimental district, and the depôt for the Argyll and Sutherland Highlanders, formerly the 91st and 93d regiments, with whom are associated as 3d and 4th battalions the Highland Borderers Militia (Stirling) and the Royal Renfrew Militia (Paisley).

To the SE of the Esplanade is the spacious quadrangular edifice called Argyll's Lodging. It is Jacobean in style, and was built in 1630 by the first Earl of Stirling. On his death in 1640 it passed into the possession of the Argyll family, and was the temporary residence of Charles II. in 1650, of the Duke of York in 1681; was the headquarters of the Duke of Argyll in 1715; and was occupied by the Duke of Cumberland in 1746 when he was on his march to the north. It was purchased by the government in 1799 and converted into a military hospital, for which it is still used. Above the doorway are the arms of the Earl of Stirling, with the mottos *Per mare per terras*, and *Aut spero aut sperno.* Above some of the windows is the boar's head of Argyll. Farther to the S is the ruin known as Mar's Work, the remains of the palace built by the Earl of Mar in 1570, and a notable specimen of the work of that age. Sir Robert Sibbald says that 'the Earl lived splendidly here,' and that James VI. and his Queen resided in it till a portion of the Castle was got ready for their reception, but of the buildings which once surrounded a central quadrangular court only the front portion now remains, and it is very doubtful whether this was ever finished. Over the entrance gateway are the royal arms, while on the towers at either side are those of the Earl and his wife. As the stones used were taken from the Abbey of Cambuskenneth, the noble builder was at the time charged with sacrilege. The inscriptions on three tablets built into the wall seem to give his answer. The first is inscribed—

> 'I pray al luikaris on this luging
> With gentil e to gif thair juging.'

Another—

> 'The moir I stand on oppin hitht,
> My faultis moir subject ar to sitht.

And the third—

> 'Esspy speik furth and spair notht,
> Considdir weil I cair notht.'

The 'luging' became in its turn a quarry, whence stones were procured for a churchyard wall at St Ninians, and had it not been that it sheltered the market-place from the west winds it would probably have been entirely removed. Opposite Argyll's Lodging was a house with a projecting turret, said to have been the residence of George Buchanan when he was here during the minority of James VI. Regent Morton's house occupied a site near the S corner of Broad Street; and E of Cowane's Hospital is a house said to have belonged to the Earl of Bothwell, and called Bothwell House or Bogle Hall. At the foot of Broad Street is Darnley House, bearing a tablet with the inscription 'The nursery of James VI. and his son Prince Henry;' and at the S end of Bow Street was a house used as the mint. It was removed in 1870. Many of the houses in Broad Street and Baker Street are characteristic specimens of old Scottish architecture, and several of them have the quaint mottoes which our ancestors of the 16th and 17th centuries were so fond of. One at least takes a somewhat unusual form:—

> 'Heir I forbeare my name or armes to fix,
> Least I or myne showld sell these stones and sticks.'

On another house is a stone tablet—possibly older than the house itself—with a tailor's scissors, and the inscription, 'This hous is foundit for support of ye puir be Robert Spittal, taillyour to James ye 4th. Anno 1530, R. S.'

Other Public Buildings.—The Old Town House, built in 1701, is at the NW end of Broad Street, and contains the burgh court rooms and the police and parochial board offices. There is a tower with an illuminated clock and containing several good bells. The oldest has the inscription, 'The Counsell bell of Sterline. Ovderogge Fecit, 1656;' another, 'Sit nomen Domini benedictum. Petrus Hermony me Fecit. Amstelodami, A.D. 1669.'

There is also a chime of fifteen bells, one having the date 1729. In front stood formerly the town cross, formed by a pillar surmounted by a unicorn, and raised on four steps. It was removed in 1792, but the unicorn is preserved over the doorway of the town house. This was the place of public execution, and it was here that the priests were scoffed at in 1569; that Archbishop Hamilton was executed in 1571; that two poor rhymesters were hanged in 1579 for writing a satire on Regent Morton; and that Hardie and Baird were beheaded in 1820. Behind the Old Town House are the old county buildings and jail. The new Town Buildings—formerly the Athenæum—containing the council chamber and corporation offices, are at the junction of Baker Street and Spittal Street. The style is poor Italian, and there is a spire. Over the entrance is a statue of Sir William Wallace, executed by Handyside Ritchie at the expense of Mr William Drummond. The new County Buildings, on the E side of Barnton Place, were erected in 1874-75 at a cost of over £15,000. The building is modified Scotch Baronial in style, and has a frontage of 120, and a depth of 80, feet, with turrets at the angles, and an ornamental porch at the main entrance. It contains a fine room for the justiciary courts, 56 feet long, 36 wide, and 26 high; sheriff and justice of peace court rooms, and the various county offices, including the headquarters of the county police. The new jail is on a commanding site to the SW of the Old Town House, and is a prominent castellated building erected in 1846-48 at a cost of more than £12,000. The grounds cover a space of about 1 acre, and there is accommodation for 60 prisoners.

The Public Halls in Albert Place, between Port Street and Dumbarton Road, were erected in 1881-83 by a joint-stock company at a cost of about £12,000, of which the Guildry of Stirling contributed £1000 in return for the use of the halls for guildry purposes. The internal arrangements are convenient and good. The east wing has a front of 98 feet, and the side to Albert Place a length of 157 feet. The large hall is 80 feet long, 67 wide, and 40 high, with accommodation for an audience of 800 in the area and 500 in the gallery. The platform at the W end is 4 feet 6 inches from the floor, and is 43 feet wide and 33 deep. Complete preparations have been made for theatrical performances, and the organ, constructed by Willis of London, cost £2000. The smaller hall to the E has accommodation for 250 persons. Over the centre doorway are the burgh arms. The building occupies the site of the old royal fish ponds. Some distance farther W is the Smith Institute, a plain but well designed building, Italian in style, erected in 1873-74 at a cost of over £6500. This building is due to a bequest of £22,000 from T. S. Smith, formerly of Glassingall (1817-69), along with all his own paintings and those of other artists in his possession at the time of his death. Mr Smith intended to erect and endow the institution in his own lifetime, but this was prevented by his sudden death, and the design has been carried out by his trustees. The building contains two picture galleries 105 by 43 feet, and 43 by 27 feet; two museums measuring respectively 148 by 30 feet, and 44 by 24 feet; a library and reading-room 50 by 28 feet, besides offices and stores. Besides the founder's own works the galleries contain good pictures by John Phillip, David Cox, David Cox, jun., Harding, Maris, Ten Kate, George Cole, and Drummond. In the museum are a number of interesting objects, including the Stirling Jug, which, as the standard of the old Scotch pint, has been in the keeping of the town council since 1457, and possibly from an earlier date; the old Linlithgow wheat firlot, made of wood hooped with brass, and adjusted at Edinburgh in 1754 to contain 21 pints and 1 mutchkin of the Stirling Jug, as settled by the Act of Parliament in 1618; or 73 lbs. and $\frac{3}{4}$ oz. French Troyes weight of Edinburgh fountain water. It contains 2197·34 cubic inches. There are also the standard bushel (1824), the chair of the Rev. James Guthrie already mentioned, a jougs, the axe and mask used at the execution of Baird and Hardie in 1820, and in the vestibule are several of the 'Stirling Heads' from the Castle. The reading-room and library have the ceiling finished in the style of the old roof of the Parliament Hall, and contain the books belonging to the old Stirling Library (1804), and those since acquired by the trustees of the late John Macfarlane of Coneyhill. The Macfarlane Library was opened in 1882, and as the trust funds admit of a considerable sum being spent yearly on books, the library will in course of time become a very large and valuable one. Visitors, other than inhabitants of the parishes of Stirling, Kinbuck, and Dunblane, pay a small sum for admission. Cowane's Hospital, now the Guild Hall, high up on the ridge to the N of the Smith Institute, is a quaint old building of 1639. It owes its first name to a bequest of John Cowane, merchant in Stirling, and Dean of Guild from 1624 to 1630, and from 1631 to his death in 1633, who bequeathed £2222 sterling, or 'fortie thousand merkis usual money of this realme, to be employed on annual rent for building and erecting ane Hospitall or Almowshous wtin. the said Burt to be callit in all tyme cumyng Cowane's Hospitall.' Twelve decayed members of the Guildry were to be maintained in the hospital, but it has been found more convenient to abandon the monastic system, and out of the annual income, which now amounts to over £2000, yearly allowances are paid to both male and female members of the Guildry varying from 3s. to 10s. per week. There are about 120 pensioners, and the patrons are the town council and the minister of the first charge. Over the doorway is a statue of the founder, and the inscription, 'This Hospital was erected and largely provyded by John Cowane, Deane of Gild, for the Entertainement of Decayed Gild Breither. John Cowane, 1639. I was hungrie and ye gave me meate, I was thirstie and ye gave me drinke, I was a stranger and ye tooke me in, naked and ye clothed me, I was sicke and ye visited me. Matt. xxv. 35.' Elsewhere on the E are—'And he which soweth bountifully shall repe bountifully. 2d Corinth. 9, 6. John Cowane;' and 'He that hes mercie on the poor lendeth unto the Lord, and that which He Hath given He will pay him agane. Prov. 19, 17. John Cowane.' The great room now used as the Guild Hall has in the E end a stained-glass window in memory of the founder. It contains a number of interesting objects, including palmers' hats, several old Bibles, including that which belonged to Cowane himself, a fine old carved oak chest which also belonged to Cowane, a pulpit from the East Church, the old guildry and town flags, the standard wine gallon of 1707, with the crown, the initials A.R., and '*Anno Regni VI°.*,' the old standard ell of 45 inches, the new yard and ell which 'wes adjusted at Edinburgh 26th of Feby. 1755 with great care by the Rev^{d}. M^{r} Alex^{r}. Bryce;' a set of old standard weights, running from $\frac{1}{4}$ lb. to 28 lbs., and a new set, dated 1707, running from $\frac{1}{8}$ oz. to 28 lbs. The Guildry is said to date from the time of Alexander II. in 1226, who gave to the burgesses of the town 'ane mercat day, to witt the Saturnday of everie week,' and 'lykwayis that they shall have their gildrie of merchds. excepting out of the same cloathe wakers and dyceplayers. We discharge and prohibit lykwayis stricklie that no man dwelling within the sherifdome of Stirling without the burt shall make any cloathe ather litted or schorne after it is waked or cause make the same except our burgesses of Stirling who are of ye gildrie of ye merchds.' This charter is known only from a confirmatory one by David II., but the latter monarch granted also in 1364 a general charter in favour of all the burgesses of Scotland, which the Stirling guildry were successful in enforcing in 1697 in a lawsuit in which it is recorded that they not only produced David's general charter but also 'the great Ring gifted by him to them.' This ring, which is unique, and was probably gifted to the brethren in 1360 when King David granted the charter to the burgh, still exists, and is a handsome gold hoop, with five stones set in the form of a cross. The whole

weighs half an ounce, and of the stones only a ruby and a garnet are real. On the outside of the hoop is the inscription in bold Roman capitals, 'Yis for ye deine of ye geild of Stirling.' It seems to have been originally intended to be worn on the forefinger, but it is now suspended from a chain, and used as one of the badges of the Dean of Guild for the time being. The Guildry Arms is the figure 4 reversed, in allusion, it is said, to Stirling being one of the 'four burghs.' Adjoining Cowane's Hospital is a good public bowling-green and a terrace on which are two of the cannon captured at Sebastopol. The Trades Hall, off the SW side of Spittal Street, is used as a meeting-place for the members of the incorporated trades, and has become associated with Spittal's Hospital. This latter, the oldest of the Stirling charitable endowments, originated with Robert Spittal, tailor to James IV., who about 1530 bequeathed certain lands to be held in trust to the town council, and the income derived from them applied to the support of decayed members of the seven incorporated trades. The plan of the beneficiaries wearing a particular dress and all living together has here also been abandoned, and the annual income, which now amounts to about £800, is divided among them in allowances varying from 2s. to 7s. weekly. In the hall is a tablet with the inscription, 'In order to relieve the distress of useful members of society, the ground within this wall, with the adjoining Hospital and lands for supplying it, were given to the Tradesmen of Stirling, in the year 1530, by Robert Spittal, who was Tailor to King James the Fourth of Scotland. He likewise gave part of his wealth for building useful bridges in this neighbourhood. Forget not, reader, that the scissors of this man do more honour to human nature than the swords of conquerors. To commemorate his benevolence the Seven Incorporated Trades of Stirling have erected this tablet.' Spittal seems to have been fond of building bridges; that over the Teith at Doune is only one of those erected by him. Stirling has a number of other charitable funds of a like character, which may in this connection be noticed here. Allan's Hospital was founded by John Allan, a writer in Stirling, in 1724, 'for the maintenance and education of the indigent male children of tradesmen belonging to the Seven Incorporated Trades of Stirling and others.' The intention here too was that the boys should live in a building to be erected for that purpose, and this was provided; but it is now used merely as a school, the annual revenue, which is about £700, being spent on 30 boys, who are admitted to the foundation at the age of 7 to 9 years, and remain in it for 5 years, during which time they receive free education, books, clothing, and an allowance of half a crown a week. Cunningham's Mortification (1808), with an income of about £200, bequeathed 'for maintaining, cloathing, and educating more poor boys of the guildry and mechanics of Stirling, and putting them to trades or business,' is now spent in the same way as the Allan fund, 18 boys being benefited by it. M'Laurin's Trust, instituted in 1838, for the erection and endowment of a school at Craigs, has funds amounting to over £2000; but they have not yet become available in consequence of being burdened with an annuity, the recipient of which still survives. On the SW side of Spittal Street, near the centre, is the Stirling Royal Infirmary. The building which it occupies, originally the Commercial Bank, was enlarged in 1883 at a cost of £1600. About 200 indoor and 1300 outdoor patients are treated every year. The poorhouse, hospital, and lunatic asylum for the district, erected in 1856 at a cost of £7000, is in Union Street, near the extreme N of the town. There is accommodation for 200 paupers. To the E of the Infirmary is the Corn Exchange, erected in 1838, where the weekly Friday markets are held. The path along the side leads through an opening in the old city wall to the Back Walk. At the corner of King Street and Murray Place is a handsome building, Italian in style, erected in 1863, at a cost of £5000, by Mr Peter Drummond as a tract depôt, and as the office of the well-known *British Messenger* and other religious publications of a like nature. Over the windows of the ground floors are carved heads representing Luther, Calvin, Zwingle, Wyklif, Knox, Guthrie, Whitefield, and Chalmers. Immediately behind this, between Murray Place and King Street, is Crawford's Arcade, Italian in style, built in 1881-82, with access to both streets, and containing a number of shops and a large central hall with accommodation for 1400 persons. Several of the banks are also good buildings.

Churches and Schools. — The High or Greyfriars Church, comprising the East and West parish churches, stands at the NW end of St John Street to the W of the Old Town Hall. The division into two churches took place in 1656. The building, which is 200 feet long, and has a massive square tower 90 feet high at the W end, consists of two portions of very different appearance and age. That to the W is the older and finer, and dates probably from the middle of the 13th century. The date generally given is 1494, but that is probably only the year when the monastery of the Greyfriars was founded, and the church became that of the convent. The massive round pillars of the four bays to the W, the flutings on the two pillars at the E end, and the style of the capitals and bases, as well as the appearance of the tower and the clerestory windows, all point to a date during the early period of the Early English style. The later appearance of the tracery of the aisle windows may be due to subsequent alteration. The large window at the NW corner was originally a doorway leading to a small chapel now unroofed and nearly level with the ground, but which at even a recent date had a roof on it. It is traditionally known as Queen Margaret's Chapel, and the rose and thistle on either side of the present window seem to indicate an English Queen Margaret. The wife of James IV. has been adopted as fulfilling the condition, but this window is so unlike those of the East Church, which dates from her time, that the identification of the Queen Margaret of the chapel with the wife of James IV. may probably be set aside as due merely to the common date of 1494. If this be so, the only queen who will answer is Margaret, the wife of Alexander III., and this brings us again to a date corresponding with the architectural style of the church. Two churches in Stirling are spoken of in the time of David I., one of them being the chapel-royal, which was dedicated by Alexander I., and the 'vicar' of the 'Kirk of Stirling' is mentioned in 1315, and in the time of David II., and there are also notices of it in the reigns of Robert II. and Robert III., when it is designated as the church of the Holy Cross of Stirling, and the present West Church is in reality this parish church rebuilt during the reign of Alexander III. The fluted pillars at the E end may indicate the greater amount of elaboration always bestowed on the part nearest the altar. The church seems to have suffered injury by fire in the beginning of the 15th century, and grants for repairs were made by the exchequer in 1407 and 1410, and there is fresh mention of 'Ecclesie Sancte Crucis de Streveling' in 1450; while in the treasurer's accounts for 1500-1 there is a charge for repairing the windows of the Greyfriars Church at Stirling, a word which would hardly have been used had the church been new, and the windows in process of insertion for the first time. The choir, which now forms the East Church, was begun in 1507, and additions were made to it by Archbishop James Beaton (1523-39), the eastern window and chancel still retaining the name of Beaton's Aisle. The transept has never been erected. In the tower, from the top of which there is an extensive and beautiful view, are four bells, one of which, remarkable for its fine tone, is supposed to date from the 14th century. The church is connected with many important historical events. It was here that in 1543 the Regent Arran publicly renounced the Protestant religion; and here, too, in the following year, the convention met that appointed Mary of Guise regent. The convent, which seems to have stood on the site now occupied by Cowane's Hospital, was totally destroyed by the Reformers in 1559,

but the church, though 'purged' of its images, was not otherwise injured, and so was all ready, in 1567, to be the scene of the coronation of James VI., then an infant thirteen months old. In 1651 while General Monk was besieging the Castle, the tower was one of the points of vantage seized by his soldiers, and the little bullet pits all over it show how hot must have been the fire directed against its holders. It was also held by the Highlanders in 1746, and the bells rang out a merry peal in honour of the victory of Falkirk. It is wonderful that Cumberland did not cause them to be broken. The West Church, which was extensively repaired in 1816, contains about 1100 sittings, and a proposal for its entire restoration is now under consideration. Underneath the W window behind the pulpit are marble tablets erected by the town council to William Drummond, Alexander Cunningham, John Allan, John Cowane, Robert Spittal, John M'Gibbon, and Thomas Stuart Smith—benefactors of the town. There are a number of other monuments—one being to Lieutenant-Colonel John Blackader (1664-1729), deputy governor of Stirling Castle—and a commencement has been made in inserting stained-glass windows. Ebenezer Erskine was one of the ministers. The East Church, which contains about 1100 sittings, was improved in 1808, and underwent thorough repair in 1869, since which time a large number of stained-glass windows have been introduced. One of the ministers was James Guthrie. An institute (1884) in connection with the East Church stands in Spittal Street, and cost, with the site, £1200. To the W of the High Church is the old churchyard with several noteworthy stones, the oldest bearing date 1523. Many of them have the reversed figure 4, showing that it marks the grave of a guild brother. One has the quaint inscription:—

> Our life is but a winter day:
> Some only breakfast, and away;
> Others to dinner stay, and are full fed.
> The oldest man but sups, and goes to bed.
> Large is his debt that lingers out the day;
> He that goes soonest has the least to pay.'

To the N of the churchyard is the beautiful new cemetery, occupying 'The Valley' already mentioned. In both 1745 and 1746 the ground here was selected by the Highland army as the site of batteries. In the cemetery there are statues of John Knox, Andrew Melvil, Alexander Henderson, James Renwick, James Guthrie, and Ebenezer Erskine, and a fine marble group, executed by Handyside Ritchie, commemorative of the heroism of the Wigtown Martyrs. At the base of the statue of Knox is the Rock Fountain, and on the N side of the ground is the structure known as the Star Pyramid or Salem Rock, with Scripture texts and symbolical designs. To the W of it is a granite cross, erected to the memory of the officers and men of the 75th (Stirlingshire) Regiment who fell in the Indian Mutiny. This portion of the ground was purchased and presented to the town by the late William Drummond (1792-1868), to whose generosity are also due the Star Pyramid, the statues of the heroes of the Reformation, and the memorial of the Wigtown Martyrs. Mr Drummond is buried near the pyramid.

A Dominican monastery, founded by Alexander II. in 1233, with a church and burying-ground, stood to the E of the present Blackfriars Street (formerly Friars Wynd), outside the old city wall, and on the site now occupied by the National Bank. It was here that Albany and his sons and the Earl of Lennox were buried, as also the pretended Richard II. The buildings, which formed the residence of Edward I. in 1298, were destroyed in 1559, but the churchyard was used till comparatively modern times, though the ground is now all appropriated for other purposes. A chapel dedicated to St Ninian stood near the South Port; and a copious spring near it, called St Ninian's Well, furnished the town till 1774 with the greater part of its necessary supply of water. Another important spring was the Butts Well behind the Smith Institute.

The North Parish Church, on the E side of Murray Place, erected in 1842, is a good Norman building, with a low, massive, square tower. It contains about 1100 sittings. Marykirk, in St Mary's Wynd, formerly a mission church, belonging to Miss MacLagan of Ravenscroft, but now belonging to the Church of Scotland, has 481 sittings. The North Free Church, on the W side of Murray Place, is a good Early English building, with tower and spire, erected soon after the Disruption, and containing about 1000 sittings. The South Free Church, off the SW side of Spittal Street, has 760 sittings. The Craigs Free Church, which was, down to 1876, a Reformed Presbyterian church, was originally built in 1783, but was renovated in 1874. It contains 320 sittings. The Free West congregation erected a new church in Cowane Street in 1881-82 at a cost of £3000. It is a handsome building, with a tower having a four-dial clock and a bell. The Erskine United Presbyterian Church is within an enclosed plot on the SW side of St John Street, immediately SE of the prison, and was erected in 1826 in room of a previous church of 1740. It was considerably improved in 1876, and is a Romanesque building, with 1400 sittings. In the centre of the plot in front is a small mausoleum marking the burial-place of Ebenezer Erskine. This spot was, in the old church, immediately in front of the pulpit, but the new church was placed farther back. Viewfield U.P. church, on a small eminence at the corner of Barnton Place and Irvine Place, is a plain Gothic building, with a spire, erected in 1860 in place of a previous church. It contains about 750 sittings. Allan Park U.P. church, on the N side of Albert Place, is an Early English building, with tower and spire; was erected in 1865-67; and contains about 1000 sittings. The Congregational church, on the W side of Murray Place, reconstructed in 1842, is a good Tudor building, with 400 sittings. The Baptist church, on the E side of Murray Place, erected in 1854, has a good Gothic front, and contains 380 sittings. The Wesleyan church, on the SW side of Queen Street, is a plain building, with 550 sittings. The Episcopal church (Holy Trinity), in Albert Place, to the W of the Public Halls, is a fine First Pointed building, erected in 1875-78, at a cost of £10,000, from designs by Dr Rowand Anderson, and containing 500 sittings—somewhat of a change since Bishop Gleig was incumbent, just a century ago, when the congregation of 50 met in a room in an old house in Spittal Street. The Roman Catholic church (St Mary's), in Irvine Place, is a Gothic building, erected in 1838, and containing 500 sittings.

The High School is a handsome Elizabethan building, designed by Messrs Hay of Liverpool, and erected in 1855 at a cost of about £5000, of which sum £1000 was contributed by Colonel Tennent, £1000 by the town-council, and £3000 by public subscription. The original design embraced buildings round three sides of a quadrangle, but of these only the portion facing the street and containing class-rooms has been erected, the other two sides intended to contain a hall, lecture-room, and museum yet remaining unbuilt. There is accommodation for 414 pupils, and instruction in the usual branches are given by a rector, two masters for English, three for mathematics, two for classics, one for modern languages, one for drawing, and one for gymnastics. The High School superseded the old burgh schools for English, classics, and mathematics. It is one of the secondary schools scheduled under the Education Act, and is now managed by the burgh school board (9 members), under whom are also Allan's, Craigs, Raploch, St Ninian's, the Stirling Infant, and the Territorial schools, which, with accommodation for 347, 450, 54, 348, 233, and 236 pupils respectively, had, in 1884, attendances of 279, 408, 36, 183, 218, and 230, and grants of £247, 13s. 6d., £391, 12s. 1d., £28, £165, 2s. 6d., £154, 13s., and £192, 12s. In the same year the elementary department of the High School had an attendance of 192, and a grant of £200, 10s. There are also a School of Art in connection with South Kensington, Episcopal and Roman Catholic day schools, and two industrial schools—one for boys and one for girls.

The Territorial school, a good building beside the West Free Church, was greatly enlarged in 1884.

Trade, etc.—Cotton manufacture in connection with the Glasgow cotton trade was largely carried on in the end of last and the beginning of the present century, but has since declined. The manufacture of shalloons was carried on to a considerable extent, so far back as the end of the 16th century, chiefly for export to the Netherlands, but it has long disappeared, having been replaced shortly after the beginning of last century by the manufacture of tartans. This industry flourished till about 1750, but thereafter fell off so much that in 1792 the weaving of tartans was almost entirely neglected, though the making of carpets was extensively carried on. It revived again, however, about 1820, in consequence of the Highland fever that sprang up after the publication of *Waverley*, and again made great progress about 1865; so that along with the kindred branches of tartan-shawls, tweeds, winceys, carpets, and yarn-spinning and dyeing, it is now the principal manufacture of the neighbourhood, the annual value of the produce being about £300,000. The preparation of leather, brewing, coach-making, and the manufacture of agricultural implements are also extensively carried on. The quay, or rather jetty, is about 1 furlong NE of the main part of the town at the point where Shore Road touches the river, but the shipping trade is now almost entirely superseded by the railway traffic. The port has, since 1707, been a creek under Alloa, and the depth of water at the wharf is 5½ feet at neap tides, and 11 feet at spring tides. A steamer plies daily to and from Leith, but its sailings are very inconvenient, as they require to be regulated by the hour of high water, and the windings of the Forth make the voyage rather tedious. The railway station, near the centre of the E side of the town, is, as has been already remarked, an important centre of communication. A tramway line from Port Street to Bridge of Allan was constructed in 1874.

Municipality, etc.—Stirling, as we have already seen, is mentioned as a burgh in the reign of David I., but the earliest known charter is one granted by Alexander II. in 1226. The original deed is lost, but the purport is engrossed at full length in the earliest charter now in existence—that granted by David II. in 1360. Confirming and extending deeds have been granted by later monarchs, the last and governing charter being that given by King Charles I. at Holyrood in 1641, in which the burgh is referred to as 'ane of the maist ancient burghes of this his Hienes Kingdom of Scotland, being erected before the days of umquhile King Alexander.' It was one of the four burghs—the others being Edinburgh, Berwick, and Roxburgh, or, when Berwick and Roxburgh were in the hands of the English, Edinburgh, Linlithgow, and Lanark—constituting the *Curia Quatuor Burgorum*, a partly legislative, partly judicial, body, which afterwards grew into the Convention of Royal Burghs. The older of the two burgh seals shows a bridge of seven arches, with a cross rising over the centre one, with Christ extended. Above His right hand is a star, and above His left a crescent. To the right of the cross are three soldiers with bows, and on the left three armed with spears. The motto is, *Hic armis Bruti Scoti stant hic cruce tuti.* On the opposite side of the matrix is a castle with trees, and round about is the motto, *Continet hoc in se nemus et castrum Strivelinse.*

Seal of Stirling.

The one now in use is smaller, and shows a wolf couchant over a rock, and the motto is *Oppidvm Sterlini.* The register of sasines commences in 1473, and the regular series of Council records in 1597, though some fragments exist of others extending back to 1561. Some of the early entries refer to matters which still require looking after. For instance, in 1561 'the consall ordanis' that 'tavernares sall all stamp thair stowpis;' and that 'nane wyne be sauld derrar nor xiiid. the pynt, under the paine of confiscing oft the pece;' and in 1562 'the counsall, havand consideratioun that thair is certane puir barnis greting and crying nychtlie under stairis for falt of lugeing, hes grantit that olklie ane laid of colis be laid in to the almous hous for lugeing of the saidis puris during this winter tyme.' In 1594 we find them, in view of the 'baptisme of the Prince,' making rules as to the price of wine—which, having been bought 'upone verray hie prices,' was to be sold at seven shillings a pint—and the rent of rooms, which was to be five shillings for 'ane chalmer weill provydit in all necessaris, honest in apparrell, everie bed being within the chalmer,' while the rent of 'chalmeris and bedding in simple sort' was to be settled 'at the discretioun of the magistrat of the quarter.' In the same year it was also found necessary to fix fines for absent and late members of council; while in 1597 watches were set at the bridge and port, to prevent all and sundry from entering therein unless they could give an account of themselves. In 1773 three members of the council—which was then elected under the old close system—having entered into an illegal combination to keep themselves and their friends in office for life, the matter was taken to the Court of Session, and by the casting-vote of the lord-president the election was declared 'null and void,' and the town was deprived of its corporate privileges. An appeal was taken to the House of Lords, when Boswell was one of the counsel, some of his arguments being furnished by Dr Johnson; but the decision was confirmed, and till 1781 there was no corporation. In that year the king granted the petition of the inhabitants, praying him to restore the burghal privileges; but the set was altered, and the franchise vested in the burgesses all together; and this continued to be the case till the passing of the Municipal Reform Act of 1883. Since that time the Police Act has also been adopted. The modern town council consists of a provost, 4 bailies, a treasurer, a dean of guild, and 14 councillors—the town being, for municipal purposes, divided into four wards. The magistrates acquired, in 1501, the hereditary sheriffship of the burgh, and the provost is also styled high-sheriff, and the bailies sheriffs. They have inside the burgh concurrent jurisdiction with the sheriff. The corporation revenue was, in 1832, £2295, in 1884, £2721. The town council acts also as the police commission, and maintains a police force of 15 men (1 to each 1067 of the population), under a superintendent with a yearly salary of £150. Water was introduced from Gillies Hill in 1774, and the present supply comes from the Touch Hills. The works are managed by a body of water commissioners elected partly by the town council and partly by ratepayers. Gas is supplied by a joint-stock company, with works near the station. Besides the guildry there are seven trades incorporated by royal charter, viz., hammermen, weavers, shoemakers, tailors, butchers, skinners, and bakers, and four incorporated by seal of cause from the magistrates—mechanics, barbers, carters, and maltmen. The town has a head post office, with money order, savings' bank, and telegraph departments, branch offices of the Bank of Scotland, British Linen Company, Clydesdale, Commercial, National, Royal, and Union Banks, a National Security Savings' Bank, and agencies of 47 insurance companies. There are a number of excellent hotels. A religious newspaper called the *British Messenger* is published monthly, and the newspapers are the Conservative *Stirling Journal* (1820), published on Friday; the Liberal *Stirling Observer* (1873), published on Thursday; the Conservative *Reporter* (1859) and the Liberal *Stirling Saturday Observer* (1836), both published on Saturday. Among the miscellaneous institutions may be noticed a

subscription reading-room in Murray Place, a Natural History and Archæological Society (formerly the Field Club), an Agricultural Society, a Horticultural Society, a Choral Society, cricket, football, curling, and angling clubs, a Religious Tract Society, a Young Men's Christian Association, and the usual religious and philanthropic associations. There is a weekly market every Friday, and cattle fairs are held on the first Fridays of March, April, and May; horse and cattle fairs on the first Friday of February and the last Friday of May; and there is a hiring fair on the third Friday of October. There is a resident sheriff-substitute, and ordinary courts are held every Tuesday and Thursday during session, and small debt courts every Thursday. A justice of peace small debt court is held on the first Monday of every month, and for other business as may be required. Quarter sessions are held on the first Tuesday of March, May, and August, and on the last Tuesday of October. Stirling unites with Inverkeithing, Dunfermline, Queensferry, and Culross in returning a member to serve in parliament, and is the returning burgh, but under the Redistribution of Seats Bill now before Parliament, it is proposed to assign a member to Stirling and Falkirk. Parliamentary constituency (1885) 2048; municipal, 2085, including 464 females. Valuation (1865) £43,158; (1875) £57,854, inclusive of £3686 for railways and £49 for tramways; (1885) £77,760, inclusive of £3823 for railways and £104 for tramways. Pop. of royal burgh (1841) 8307, (1861) 10,271, (1871) 10,873, (1881) 12,194. Pop. of parliamentary burgh, the size of which has been already indicated, (1861) 13,707, (1871) 14,279, (1881) 16,013, of whom 7588 are males and 8425 females. Of these 13,167 are in Stirling parish and 2845 in St Ninians, 1647 being in St Ninians village. Houses (1881) 3369 inhabited, 270 uninhabited, and 99 being built. Of these 2760, 185, 90 were in Stirling parish, and the rest in St Ninians parish, 371, 64, 0 being in St Ninians village. Of the whole population in 1881, 630 men and 154 women were connected with the civil and military services and with professions, 126 men and 832 women were domestic servants, 673 men and 20 women were engaged in commerce, 160 men and 86 women in farming and fishing, 3132 men and 1073 women in handicrafts or dealers in manufactured substances, and there were 2695 boys and 2709 girls of school age.

See also Sir Robert Sibbald's *History and Description of Stirlingshire* (Edinb. 1710); Nimmo's *History of Stirlingshire* (1st ed., Edinb. 1777; 2d, Stirling, 1817; 3d, Edinb. 1880); Sutherland's *General History of Stirling* (Stirling, 1794); Chalmer's *Caledonia* (1807-24); Mrs Graham's *Lacunar Strevilense* (1817); R. Chambers' *Picture of Stirling* (Edinb. 1830); *History of the Chapel Royal of Stirling* (Grampian Club, Edinb. 1882); a number of papers in the *Proceedings* of the Natural History and Archæological Society; *Local Notes and Queries reprinted from the Stirling Observer* (Stirling, 1883); and *Charters and other Documents relating to the Royal Burgh of Stirling* (Glasg. 1884).

Stirling and Dunfermline Railway. See North British Railway.

Stirlingshire, one of the midland counties of Scotland, partly Lowland and partly Highland, and consisting of a main portion and two detached sections to the NE, included in Perthshire and Clackmannan. The main portion is bounded N by the county of Perth, NE by the county of Clackmannan and the detached portion of Perthshire about Culross, E by the Firth of Forth and Linlithgowshire, SE by Linlithgowshire, S by Lanarkshire and a detached portion of Dumbartonshire about Kirkintilloch, and SW and W by Dumbartonshire. The first detached section lies 3 miles NE of Bridge of Allan, and measures 2 by 1¼ mile. It is entirely surrounded by Perthshire. The second detached section lies 1½ mile E of this, and is much larger, extending northward from the Devon at Alva for over 4 miles, and averaging 2 miles wide at right angles to this. It is bounded on the N by Perthshire, and E, S, and W by Clackmannanshire. The shape of the main body of the county is irregular, but there may be said to be a compact eastern portion measuring 27½ miles, from Grangemouth on the E to the junction of Catter Burn with Endrick Water on the W, and averaging 13 miles from N to S at right angles to this; and from this compact portion a long projection passes up the NE side of Loch Lomond for 20 miles, 6½ miles wide at starting, and tapering to the head of Glen Gyle. The extreme length of the county, from the head of Glen Gyle south-eastward to Linlithgow Bridge, is 45¾ miles; and the extreme breadth, from the boundary line NE of Bridge of Allan south-westward to the Kelvin near Killermont House, is 22½ miles. The boundaries are largely natural. Beginning at the NW corner, the boundary line follows the stream in Glen Gyle down the glen to Loch Katrine (364 feet), and then passes along the loch itself to Coalbarns, SE of Stronachlachlar, whence it strikes straight west-south-westward to Loch Arklet (463). From near the NE end of this loch it passes south-south-eastward to the top of Beinn Uaimhe, and thence south-eastward by the summits of Beinn Dubh (1675 feet) and Mulan an t' Sagairt (1398) to Duchray Water at the entrance to Gleann Dubh, 1⅝ mile W of the W end of Loch Ard. From this the boundary is Duchray Water, to a point ¾ mile below Duchray Castle, and thereafter the line winds south-eastward till it reaches a tributary of Kelty Water, ¼ mile WSW of Gartmore. It follows this stream to the Kelty, then the Kelty to the Forth, and thereafter the last river for 4¼ miles, till, WNW of Port of Monteith station, it turns southward to Bucklyvie Moor, then eastward for 1¼ mile, and again northward back to the Forth ¼ mile above Arngomery Burn, and from this it follows the Forth for 19¾ miles to the junction of the Forth and Teith. Here it passes north-north-eastward, to the SE of the policies of Keir, and Lecropt church, curves round, 1 mile N of Bridge of Allan, and then turns back through the policies of Airthrey Castle to the Forth near Causewayhead station, whence it follows the main channel of the river and the firth all the way to the mouth of the river Avon. The latter river separates the county from Linlithgowshire for 13¾ miles, upwards to the junction of the Drumtassie Burn, which then forms the boundary to its source, and after this the line passes westward to North Calder Water, which it follows for 1 mile up to Black Loch. Crossing this loch, it curves north-westward to the river Avon, ½ mile below the great bend near Fannyside Loch, and follows this river up to Jawcraig, whence it passes westward to the Castlecary Burn, and follows this downwards to Bonny Water. Thereafter it keeps near the Forth and Clyde Canal on the N side, along a small stream that forms the head source of the Kelvin, and then with minor irregularities follows the Kelvin for 12½ miles to a point barely ½ mile above Killermont House. From this the line passes irregularly to the NW, till near Clober House it reaches the Allander Water, up which and the Auldmurroch Burn it passes to Auchingree Reservoir. From the reservoir it runs north-westward, partly by Crooks Burn, to Catter Burn, follows this downward to Endrick Water, and then the course of the latter to Loch Lomond, where, curving outwards to include the islands of Clairinch, Inchcailloch, Inchfad, Inchruim, and Bucinch, it passes between Inchlonaig (Dumbartonshire) and Strathcashell Point, and then up the centre of the loch till opposite Island Vow, 2 miles from the N end of the loch, where it turns eastward to the summit of Beinn a' Choin (2524 feet), and thence by Stob nan Eighrach (2011) to the stream in Glen Gyle. Near the place where Perthshire crosses to the N side of the Forth, Stirlingshire includes, between Arngomery and Kippen, a portion of Perthshire measuring 2½ miles by fully ¼ mile. The area of the county is 466·53 square miles or 298,578·65 acres, of which 3294 are foreshore and 8946 are water, while of the whole 9176 acres lie N of the Forth, including the two detached portions of the county. Of the land surface of 286,338·65 acres, 114,678 were under crop, bare, fallow, and grass in 1884, and 12,483 under wood—an increase in the former

case of 23,278 acres within the last thirty years, and a decrease in the latter case of about 500 in the same period. The mean summer and winter temperatures differ but little from what (58° and 37°) may be taken as those for the central Scottish counties; and the mean average annual rainfall varies greatly, being only about 35 inches for the district about Stirling, while at the lower end of Loch Lomond it is 55, and farther up the loch rises to over 90. Among the counties of Scotland, Stirling is twentieth as regards area; ninth as regards population, both absolutely and in respect of the number of persons (251) to the square mile; and tenth as regards valuation.

Surface, etc.—The eastern part of the county is finely wooded, well cultivated, and undulating, but no portion of it reaches 500 feet above sea-level, and this flat tract is prolonged up the valleys of the Forth and Kelty, sweeps from the neighbourhood of Flanders Moss southwards by Bucklyvie and Balfron, and thence down the valley of Endrick Water to the SE end of Loch Lomond. In the centre of the compact eastern portion of the county the ground slopes upward from the valley of the Forth at Gargunnock and Kippen to the Gargunnock Hills (highest point 1591 feet), and thence southward in an undulating grassy and heathy plateau from 1000 to 1400 feet high, and terminating along the S edge in the Kilsyth Hills (highest point, Laird's Hill, 1393) overlooking the valley of the Kelvin at Kilsyth. From the NW portion of the Kilsyth Hills the long green line of the Campsie Fells stretches away westward to the flat ground at the SE end of Loch Lomond, their general height being from 1500 to 1800 feet, and the highest summit, Earl's Seat (1894 feet). These throw out on the SW the lower spurs known as the Strathblane Hills, and from this the ground undulates downwards by Milngavie to the valleys of the Kelvin and the Clyde. Northward the Campsie Fells slope down to the valley of Endrick Water, on the opposite side of which, at Fintry, are the Fintry Hills (highest point, 1676 feet), NW of which, beyond the hollow of the headstream of the Endrick—here making a sharp bend—are the Gargunnock Hills. The long projection already referred to as branching off to the NW along Loch Lomond is purely Highland in its character, and contains the whole of the summits, from Beinn a' Choin south-eastward, which have been already described in the article on Loch Lomond. The highest summit is Ben Lomond (3192 feet), and the ridges slope rapidly down in the SW to Loch Lomond; and on the NE towards Loch Katrine, and Lochs Chon and Ard, and the upper waters of the Forth. The two detached portions of the county are among the Ochil Hills.

Nearly half of Loch Lomond (23 feet) is in Stirlingshire, but otherwise the lakes of the county are few and small. The southern shore of Loch Katrine (364 feet) for 2 miles at the western end lies along the boundary, and wholly in the county are Loch Arklet ($1 \times \frac{1}{4}$ mile; 463 feet); Walton Reservoir ($\frac{1}{8} \times \frac{1}{8}$ mile), at the base of the Fintry Hills on the S; Loch Coulter (5×3 furl.), 3 miles NW of Dunipace; reservoirs near Carron Ironworks, about Kilsyth, and between Strathblane and Milngavie, one of this last group being the settling reservoir at Mugdock for the Glasgow water-works; and in the SE of the county Loch Ellrig ($\frac{3}{4} \times$ barely $\frac{1}{4}$ mile), Little Black Loch, and part of Black Loch. The whole of the southern side of the county is drained by Duchray Water, the Kelty, and the Forth, with the innumerable smaller streams flowing to them; the eastern portion by the Bannock Burn, the Pow Burn, the Carron and Bonny Water, and the Avon, with the smaller streams flowing to them; the centre is drained by the upper waters of the Carron and Endrick Water; in the S and SW are the Kelvin, with Garrel Burn, Glazert Water, and Allander Water; the centre of the W side has Endrick Water and the streams flowing to it; while Loch Lomond receives a large number of small burns from the mountains along the NE side. Loch Arklet contains capital trout, red-fleshed, and almost as good as those of Loch Leven, but it is preserved. The fishing in the larger streams is good, but in the smaller it is worthless.

Geology.—Apart from the economic value of the mineral fields along the margin of the county from Strathblane to Stirling, there are several features of special interest connected with the geology of Stirlingshire. Prominent among these must be ranked the remarkable volcanic chain of the Campsie Fells, where the successive lava flows can be traced, piled on each other like horizontal lines of masonry. The geological formations represented within the county are given in the following table:—

Recent.	Peat and alluvium.	
	Raised Beaches.	25-Feet Beach.
		50-Feet Beach.
Pleistocene.	100-Feet Raised Beach.	
	Moraines, Sand, and Gravel.	
	Boulder-clay.	
Carboniferous.	Coal-Measures.	Red Sandstone group.
		Coal-bearing group.
	Millstone Grit.	
	Carboniferous Limestone.	Upper Limestone group.
		Middle Coal-bearing group.
		Lower Limestone group.
	Calciferous Sandstone.	Upper or Cement-stone group, which in Stirlingshire is for the most part replaced by contemporaneous volcanic rocks.
		Lower Red Sandstone group.
Old Red Sandstone.	Lower Old Red Sandstone.	Conglomerates, sandstones, and shales.
Metamorphic rocks of the Highlands.		

A line drawn from the shore of Loch Lomond near Balmaha NE to a point near Aberfoyle marks the position of the great fault, bringing the Old Red Sandstone into conjunction with the metamorphic rocks of the Highlands. That portion of the county situated to the NW of the fault is wholly occupied by these metamorphic strata, being repeated by various folds, some of which are inverted. Close to the fault occur the oldest strata consisting of alternations of slates and schistose greywackes, occasionally merging into pebbly and even conglomeratic bands which are inclined to the NW. These beds pass upwards into fine silky hydro-mica schists alternating with grit bands containing pebbles which are still recognisable. A zone of massive grits, well developed in Perthshire, crosses this county from Ben Venue through Ben Lomond to Loch Lomond. To the N of this line the strata are repeated by a series of folds, and as we advance N to the border of the county they gradually assume a more crystalline form. To the S of a line drawn from Lochard to Rowardennan the general dip of the beds is to the S, which continues till we approach near to the great fault. In that district there is a constant repetition of slate and greywacke with an occasional band of limestone, the sedimentary strata being as little altered as the beds at Callander and Lochard.

The representatives of the Lower Old Red Sandstone cover a belt of ground stretching from the great fault already indicated SE to Kippen and Killearn. The beds occupying the lowest geological horizon are exposed along the margin of the fault in the drum of Clashmore about 3 miles SW of Aberfoyle, where a vertical band of porphyrite is seen in contact with the fault. This bed of lava evidently represents a portion of the great volcanic series of the Ochils. For upwards of 1 mile from the fault the conglomerates and red sandstones overlying this band of porphyrite are highly inclined or nearly vertical, the general inclination being towards the SSE. As the observer advances farther S, the angle of inclination gradually diminishes, and the beds are repeated by occasional minor undulations till he reaches a point about 3 miles from the fault which forms the centre of a great synclinal fold. The axis of this basin coincides with a line drawn from Flanders Moss to a point near Drymen. On the SE side of this synclinal axis the general dip of the beds is towards the NW, and hence the observer crosses anew the same series of beds in regular order. It is observable, however, that the strata along the Highland border are always much more

conglomeratic than those occupying the same geological horizon situated several miles to the S. The conglomerate bands close to the great fault are composed chiefly of porphyrite pebbles, but as we ascend in the geological succession the porphyrite pebbles disappear, and the blocks consist wholly of various metamorphic rocks of the Highlands. The strata occupying the centre of the syncline, which are the highest members of this formation in the county, are composed of grey sandstones which yielded to Mr R. L. Jack numerous plant remains, regarded by Mr Kidston as specimens of *Arthrostigma* (Dawson). These grey sandstones underlie the great conglomerates of Uamh Var in Perthshire, which are hardly, if at all, represented in this county.

Resting on the denuded edges of the Lower Old Red Sandstone strata comes a succession of red sandstones and conglomeratic marls, forming the base of the Carboniferous system. Along the line of junction the Lower Old Red strata are inclined to the NW, while the members of the overlying group are inclined to the SE. It is evident, therefore, that in this area there is additional proof of the extensive denudation which intervened between the Lower Old Red Sandstone and the deposition of the red sandstone series at the base of the Carboniferous system. The unconformable junction between the two formations is not traceable, however, across the county, for between Kippen and Balfron they are brought into contact with each other by a fault trending ENE and WSW. This fault is a continuation of the great dislocation throwing down the Clackmannan coalfield against the Old Red volcanic rocks of the Ochils. Near the top of the group there is a concretionary cornstone which has been worked for lime at intervals between Balfron and Gargunnock. The red sandstones just described are succeeded by blue, grey, green, and red clays, with numerous thin bands and nodules of impure cement-stone, and occasional beds of sandstone, forming the base of the Cement-stone group. They skirt the N escarpment of the Campsie Fells, and are likewise seen in some of the glens on the S side of the range near Clachan of Campsie and on the hills above Kilsyth. One of the finest sections of these beds occurs in the Ballagan Burn near Strathblane. Along the base of the escarpment on the N and W sides of the range they are overlaid by white sandstones, which at intervals are associated with fine volcanic tuffs. These tuffs are specially observable to the E of Fintry, and also to the N of Kilsyth, where they alternate with sheets of porphyrite. To these succeed a grand development of contemporaneous volcanic rocks consisting almost wholly of sheets of diabase porphyrite, with few or no intercalations of tuffs. Occupying the same horizon as the volcanic rocks of the Kilpatrick and Renfrewshire hills (see article on geology of Renfrewshire, *Ord. Gaz.*, vol. vi.), they reach a thickness in the present area of nearly 1000 feet. The successive lava flows are admirably displayed on the S side of the chain, forming a series of parallel beds recognisable even from a distance. Skirting the escarpment on the S side, a great fault is traceable from Strathblane E to near the Carron Water, which brings the overlying Carboniferous Limestone series into conjunction with the cement-stones and the porphyrites at the base of the volcanic series. At the E end of the range, however, from a point W of Stirling S towards the Carron Water, the upper limit of the volcanic rocks is well defined. In that direction the lavas are gradually thinning out, but eventually they pass underneath blue shales with cement-stone bands forming the top of the Cement-stone group. It is apparent, therefore, that in Stirlingshire this group is mainly represented by volcanic rocks. It is interesting to observe, however, that not far to the E of Bridge of Allan, at Causewayhead, this volcanic series is not represented at all; and where the horizon emerges in the Cleish Hills from beneath the Clackmannan Coalfield it is represented merely by some bands of tuff. The roots of some of the old volcanoes which discharged the lavas of the Campsie Hills are still to be found in different parts of the county, especially on both sides of the Blane Valley W of Strathblane. Dumgoyne Hill is perhaps one of the best examples in that region. They also occur on both sides of the Endrick at Fintry, where they pierce the sedimentary beds underlying the volcanic series and the porphyrites and tuffs at the base. Meikle Bin, the highest peak in the Campsie range, marks the site of another of these ancient volcanoes.

STIRLINGSHIRE

As indicated in the table of geological formations the triple classification of the Carboniferous Limestone series obtains in this county. Beginning at the W limit of this important division we find the limestones of the lower group lying at low angles against the volcanic rocks. From the researches of the Geological Survey it would appear that on descending the hill slope the observer crosses the Hosie Limestone and the Hurlet Limestone with the underlying coal, until, in the bed of the valley, he finds the white sandstone underlying the limestones. On the South Hill of Campsie the same beds reappear, and the Hurlet limestone and coal can be traced more or less continuously round the slope. Passing E to the neighbourhood of Kilsyth, there is a great development of the middle coal-bearing group, forming indeed one of the most valuable mineral fields in Scotland on account of the various seams of coal and ironstone. From Cairnbog E by Kilsyth to Banton the beds are thrown into a series of small arches and troughs, the most conspicuous being the anticlinal fold at Kilsyth, locally known as 'The Riggin.' Again, in the tract between Denny and Stirling, the various subdivisions of the Carboniferous Limestone series dip towards the E, and there is a general ascending series from the Hosie Limestone through the coals and ironstones of the middle group to the Index, Calmy, and Castlecary Limestones of the upper group.

Along the E margin of the county the strata just described are followed by the Millstone Grit, consisting of alternations of thick sandstones and fireclays, with irregular seams of coal and clayband ironstone. To these succeed the true Coal-measures, which are well developed between Stenhousemuir and Grangemouth, and again at Falkirk. At the former locality the prominent seams are the Coxroad, the Splint, and the Craw Coals, the highest being the Virtuewell seam. Between Dennyloanhead and Coneypark there is a small outlier of Coal-measures thrown down by two parallel faults running E and W. On the N side the outlier is brought into contact with the Carboniferous Limestone, and on the S side against the Millstone Grit and the Carboniferous Limestone.

There are numerous intrusive sheets of basalt rock associated with the Carboniferous strata, of which, perhaps, the most conspicuous extends from Abbey Craig through Stirling to Denny, where its outcrop is shifted further W by a fault. It is perhaps connected with the sheet so often repeated in the neighbourhood of Kilsyth, though here it occupies a higher horizon among the coal-bearing series of the Carboniferous Limestone, while at Denny the sheet is intruded in the lower limestones. A glance at the Geological Survey maps will show the number of Tertiary basalt dykes traversing the county.

During the glacial period the direction of the ice flow between Loch Lomond and Loch Katrine was nearly N and S. On reaching the plain between Drymen and Stirling, the movement was gradually deflected towards the SE, and eventually as the ice crossed the range of the Campsie Hills, the direction became nearly E, parallel with the escarpment on the S side of the range. There is an extensive deposit of boulder clay throughout the county, which varies in character with the underlying strata. An interesting feature connected with it is the occurrence of shells at certain localities in the Endrick Valley. Near Drymen station, a section was exposed showing on the surface about 12 feet of boulder clay resting on 7 feet of laminated blue clay, which yielded marine shells and the antler of a reindeer. Mr R. L. Jack believes that the shell fragments found in the boulder clay in the basin of the

Endrick have been derived from the denudation of such marine deposits. The later glaciers must have attained great dimensions in the higher portions of the county, judging from the great moraines which are seen along the valleys.

In this county there are deposits, evidently belonging to the 100-feet beach, consisting of sands, gravels, and clays, which cross the watershed of the midland valley, and are to be found at Kilsyth. At a lower level there is another ancient beach, the upper limit of which is marked by the 50-feet contour line, composed of laminated clay, mud, silt, and sand. It now forms the well-known Carse of Stirling. These deposits are abundantly charged with recent sea shells, and they have also yielded the remains of whales, canoes, and implements.

Economic Minerals.—The geological horizon of the valuable seams of coal and ironstone has already been indicated. In the Kilsyth district there are 4 seams of black-band ironstone wrought, comprising the Possil and Banton seams. There are also several beds of coal, of which the Banton Main is much in demand. The well-known Hurlet Limestone has been extensively wrought in the Campsie district and the seam of alum-shale underlying this limestone. The upper limestone group yields a large supply of lime; one of the bands, viz., the Calmy or Arden, being formerly much wrought. Two valuable coal seams, known as the Hirst coals, are associated with this band, being found only a few fathoms below the limestone. The seams are in high repute, owing to their caking properties, being nearly equal to Newcastle coal. Again, in the true Coal-measures in the neighbourhood of Grangemouth and Carron, the chief coals sought after are the Splint and Coxroad seams, while in Falkirk they are also in much request. Excellent building stone is obtained from the different subdivisions of the Carboniferous formation. Sandstones belonging to the Carboniferous Limestone series are wrought at Kilsyth, Castlecary, and other localities, while the sheets of intrusive basalt are largely in demand for paving stones. The red sandstones between Killearn and Kippen are also locally used for building purposes.

Soils and Agriculture.—The soils may be divided into carse, dry field, hill pasture, moor, and moss. The first, which includes some of the finest land in Scotland, extends for 26 miles along the Forth, from the Avon upwards to beyond Kippen, with a breadth of from ½ to 4½ miles, and covering an area of about 36,000 acres. It is flat or slopes gently from the S and SW towards the river, the height above sea-level varying generally from 12 to 40 feet, but some of it lies lower, having been reclaimed from the sea in the end of last, and the beginning of the present, century. Originally a bluish argillaceous earth, damp and marshy, it has been brought into its present condition of a fertile friable loam by the thorough application of deep draining and subsoil ploughing first introduced by Mr Smith of Deanston. 'It is perfectly wonderful,' says a writer in the *Quarterly Journal of Agriculture* for 1839, 'to behold the mighty change this thorough drain system is making in the different parts of the county where it is in operation. Wet land is made dry; poor weeping clays are converted into turnip soil; and even what would formerly have been accounted dry is advanced in quality. Whole parishes in the vicinity of Stirling are completely transformed from unsightly marshes into beautiful and rich wheat fields; and where the plough could scarcely be driven for slush and water, we see heavy crops per acre and heavy weight per bushel, the quantity and the quality alike improved.' The drainage would now, in several places, again need to be looked to. The depth of this soil is often over 30 feet. It is everywhere free from stones and pebbles, and the place and period of its formation are indicated by the beds of recent shells which it contains at various depths. The dry field begins at the higher margin of the carse, comprehends the arable slopes on the lower part of the hills, and occupies all the straths, valleys, and low grounds not included

in the carse district. This soil varies very much in quality and in character, but though it is sometimes very inferior, it is much oftener a highly fertile loam or gravel, particularly suitable for the cultivation of potatoes and turnips. Dryfield soil prevails in the parishes of Polmont, Larbert, Denny, St Ninians, Kilsyth, and Baldernock, and in portions of Muiravonside and Slamannan, as well as all the parishes in the hilly central division of the county—Strathblane, Campsie, Killearn, Balfron, Gargunnock, and Kippen. In the district between Linlithgow and Stirling it is so good and fertile as to be almost equal to carse land, and the portion of it sloping down towards the valleys of the Forth and Endrick are also good. The moorland was, in the latter half of last century, very extensive, comprehending about one-fourth of the whole county, but it has now been almost all improved into dryfield, only a small portion being left in the Highland district, chiefly in the parish of Buchanan. The hill-pasture occupying the rest of the Highland district, all the rising-grounds already mentioned in the centre and W of the shire, and most of the detached portions of the county have a sandy or peaty soil covered with heath and short grass. It embraces nearly half of the whole county, and includes some of the best grazing ground in the whole of Scotland. In the early part of the present century moss occupied about one-thirtieth of the whole area, but this proportion has since that time been much reduced by reclamation, principally in Slamannan and in the carse district. In the latter case it is worth removing, as it overlies land of excellent quality, but in the W of Slamannan parish, where a considerable district is still covered with a mass of it from 3 to 12 feet deep, the sandy soil beneath is valueless. The increase in the amount of arable land within the last 30 years has been already stated. In the percentage of cultivated area Stirlingshire comes twelfth among the Scottish counties, the proportion being 40·05, while that for all Scotland is 24·2. The areas under various crops at different dates are shown in the following tables:—

Grain Crops.—Acres.

Year.	Wheat.	Barley or Bere.	Oats.	Total.
1854	4986	6773	22,379	34,138
1870	3818	4995	19,480	28,293
1877	2863	4956	19,244	27,063
1884	2766	4174	19,330	26,270

Grass, Root Crops, etc.—Acres.

Year.	Hay, Grass, and Permanent Pasture.	Turnips.	Potatoes.
1854	39,656	5964	3607
1870	..	4885	4941
1877	69,370	4898	4265
1884	74,520	4432	3607

while there are about 650 acres annually under rye, peas, vetches, etc., 3450 acres under beans, 1700 acres fallow, and generally from 50 to 80 acres under flax, the last having gradually fallen off since 1854, when there were 770. There is the same falling off in the area under wheat as in the other Scottish wheat-growing counties. The seeming falling off in the area under the plough since 1854 has been remarked on in previous county articles. The wheat and beans are grown on the carse land, and the average yield of the former is 32 bushels per acre; of barley, 38 bushels; of oats, 35 bushels; of turnips, 16 to 24 tons; of potatoes, 4 to 8 tons. In the S and W of the county, along the railways, and about the towns many of the farms are used for dairy purposes. Rents vary from 12s. 6d. to £3 per acre; and sheep-grazing is 2s. 6d. to 6s. a head, except on the Ochils, where it is from 8s. to 10s.

STIRLING SHIRE.
Loch Katrine
Ben Lomond
Ben Venue
Ben An
Ben Ledi
Callander
Brig o' Turk
Loch Vennachar
L. Ruskie
L. Menteith
Port of Menteith
Thornhill
Doune
Dunblane
Bridge of Allan
Stirling
Cambus
Alloa
Clackmannan
Dollar
Kincardine
Blairdrummond
Cardross Br.
Kippen
Gargunnock
Gargunnock Hills
Touch
Fintry
Campsie
Campsie Fells
Kilsyth Hills
Kilsyth
Denny
Dunipace
Larbert
Falkirk
Grahams Dyke
Roman Wall
Helensburgh
Dumbarton
Castle
Greenock
River Clyde
Renfrew
Paisley
Glasgow
to Edinr
Kirkintilloch
Condorrat
Cumbernauld
Auchinvelly
Muckcroft
Woodhead
Gaitgend
Carbeth
Strathblane
Killearn
Balfron
Buchanan
Drymen
Luss
Camstraddan
Balmaha
Rowardennan
Inversnaid
Aberfoyle
Port of Menteith
Callander
Brig o' Turk
Doune
Dunblane
Bridge of Allan
Stirling

The agricultural live-stock in the county at different dates is shown in the following table :—

Year.	Cattle.	Horses.	Sheep.	Pigs.	Total.
1854	29,112	5279	85,513	2488	122,392
1868	25,847	..	116,277	1791	..
1877	29,028	4765	108,862	2205	144,860
1884	31,228	4572	114,292	2246	152,338

For dairy purposes Ayrshire cows are generally kept, and at several farms there are excellent pure bred herds. Cattle kept for feeding are generally crosses, though some also are shorthorns. The fine pure bred shorthorn herd formerly belonging to the Earl of Dunmore has been dispersed, but a few of the leading proprietors keep small herds. The horses are chiefly Clydesdales, and some of the farmers are well-known breeders. The best sheep are blackfaced, but there are also Leicesters and crosses. In 1884 there were in the county 986 turkeys, 440 geese, 3712 ducks, and 36,851 fowls. Of 1537 holdings in the county, 789 were 50 acres and under, 382 between 50 and 100, 329 between 100 and 300, 29 between 300 and 500, 7 between 500 and 1000, and 1 above 1000. In 1881, 966 farmers employed 1057 men, 263 boys, 264 women, and 430 girls.

Anciently a large portion of the county seems to have been covered with wood, and most of the mosses in the carse and dryfield seem to have originated in the decay of these forests. Where no mosses are now found—*e.g.*, between Stirling and Polmont—there must also have been large tracts of woodland at Torwood Forest and elsewhere. About 1735 extensive plantations were formed on the estates of the Duke of Montrose, Sir Charles Edmonstone, and Lieutenant-General Fletcher Campbell; and by 1854 the area under wood was 13,045 acres. It was, in 1884, 12,483. Of the old orchards planted and tended by the monks in the E of the county none now remain ; but 27 acres were in 1884 used as orchards and 27 as market gardens. According to the *Miscellaneous Statistics of the United Kingdom* (1879), 284,751 acres, with a total gross estimated rental of £521,407, are divided among 4257 proprietors, the Duke of Montrose holding 68,878 acres (rental £15,706), Mr Forbes of Callendar 13,041 (£16,215), and eight together 55,342 (£54,977), fourteen 48,052 (£48,758), eighteen 24,395 (£32,807), forty-one 30,000 (£63,802), etc. Thus two only have more than 10,000 acres. Many of the smaller proprietors and feuars obtained possession of their lots in consequence of former Dukes of Montrose, and Earls of Mar, Menteith, and Glencairn, having made grants to some of their retainers and their heirs for ever at very small rents. The Earl of Wigtown, who had large estates in the neighbourhood of Denny, was so convinced that the Union in 1707 would ruin the country that he sold all the property to his tenants on condition that they would continue to pay as feu-duty their rental at the time. The principal mansions, most of which are separately noticed, are Airth Castle, Airthrey Castle, Arngomery, Antermony House, Aucheneck House, Auchinbowie House, Auchinreoch House, Auchmedden Lodge, Avondale House, Balfanning House, Ballagan House, Ballikinrain House, Ballindalloch, Balquhatston House, Banknock House, Bannockburn House, Bantaskine House, Bardowie House, Blairquhastle, Boquhan, Buchanan Castle, Callendar House, Candie House, Carbeth House, Carbrook House, Carnock House, Carron Hall, Clober House, Colziam House, Craigbarnet House, Craigend Castle, Craigforth House, Craigmaddie House, Craigton, Culcreuch, Denovan, Dougalston House, Duchray Castle, Dunipace House, Dunmore Park, Duntreath House, Garden, Gargunnock House, Gavell House, Glenbervie, Glenfuir House, Glenorchard House, Glorat House, Hayston House, Herbertshire House, Inversnaid Lodge, Kerse House, Killearn House, Kincaid House, Kinnaird House, Kirkton House, Larbert House, Laurence Park, Laurelhill, Leckie House, Leddriegreen House, Lennox Castle, Livilands, Manuel House, Meiklewood House, Merchiston Hall, Millfield House, Muiravonside House, Neuck, Parkhill House, Plean House, Polmaise, Polmont House, Polmont Park, Quarter House, Rowardennan Lodge, Sauchie House, Seton Lodge, Stenhouse, Thornhill House, Touch House, West Quarter House, and Westertown House. In the detached Alva portion is Alva House.

Industries.—The manufactures of the county are numerous and important, comprising, besides those connected with its minerals, the weaving of carpets, tartans, tweeds, winceys, and other woollen fabrics at Alva, Bannockburn, Cambusbarron, and Stirling ; and of cotton at Balfron and Milngavie. There are printworks and bleachfields at Denny and Milngavie, as well as at Kincaid and Lennoxtown, and several other localities in the parish of Campsie. There are large chemical works at Campsie, Denny, and Falkirk, paper works at Denny, a pottery at Dunmore, fish hatcheries at Howietoun, near Sauchie House ; and distilleries at Glenguin, Glenfoyle, Gargunnock, Cambus, Bankier, Bonnymuir, Rosebank, and Camelon. The great iron industries are noticed under Carron Ironworks, Falkirk, and elsewhere, and details will be found for the other industries in the separate articles dealing with the places or under the different parishes. The position and structure of the Stirlingshire coalfield have been already indicated in the section on the geology, and it here remains but to notice its economic aspects. The total amount of coal raised from the whole of the Scottish coalfields in 1882 was 20,515,134 tons, valued at the pit mouth at £4,541,935 ; and of this the 47 Stirlingshire collieries produced 1,153,389 tons, valued at £288,347 at the pit mouth. Of the 2,404,177 tons of ironstone raised in the same year all over Scotland, valued at £1,123,286, 71,837 tons, valued at £32,837, were obtained in Stirlingshire ; as were also 9850 tons of fire-clay out of a total of 435,457 tons for all Scotland, the value being £1231. Sandstone is quarried at Dunmore, Polmaise, and Plean, and limestone at several places about Campsie.

Communications, etc.—The commerce is principally centred at Grangemouth, but the county is very well provided with roads and railways. Of the former the three main lines may be said to be that from Edinburgh to Glasgow by Falkirk, Kilsyth, and Kirkintilloch ; that from Edinburgh to the north by Falkirk, Larbert, and Stirling ; or the parallel route, Falkirk, Denny, and Stirling ; and that from Stirling up the valley of the Forth, and by Bucklyvie, Balfron, Killearn, and Milngavie, or Bucklyvie, Drymen, and New Kilpatrick to Glasgow. An important branch connects the first and third of these across the centre of the county by Kippen, Fintry, and Campsie, to Kirkintilloch. There are also a large number of excellent cross and district roads. The eastern part of the county is traversed by the main line of the North British system between Edinburgh and Glasgow and between Edinburgh and Larbert ; and the main line of the Caledonian between Glasgow and Stirling ; and also that from Glasgow by Airdrie to Slamannan, Manuel, and Bo'ness. From Lenzie Junction (North British) there is a branch by Lennoxtown and Strathblane to Killearn and Balfron ; and from the Dumbarton section, a short branch to Milngavie. From Stirling another section of the North British system passes up the valley of the Forth, and on by Bucklyvie and Gartness to Balloch, uniting with the Killearn branch near Balfron. From near Larbert a branch of the Caledonian system leads to Grangemouth, and there are also a branch line from Larbert to Denny, and many other branches in the SE from both systems. The Forth and Clyde Canal also passes through the county from Castlecary to Grangemouth.

The only royal burgh is Stirling. Falkirk is a parliamentary burgh and burgh of regality. Kilsyth is a police burgh and burgh of barony ; and Alva, Denny and Dunipace, Grangemouth, and Milngavie, are police burghs. Places with upwards of 5000 inhabitants are Falkirk, Kilsyth, and Stirling ; towns with between 5000 and 2000 inhabitants are Alva, Bannockburn, Bridge of Allan, Denny, Grangemouth, Lennoxtown,

Milngavie, and Stenhousemuir ; places with populations of between 2000 and 1000 are Bonnybridge, Cambusbarron, Lauriston, and Slamannan ; places with populations of between 1000 and 500 are Balfron, Binniehill and Southfield, Hollandbush and Haggs, Limerigg and Lochside, Milton, Parkfoot and Longcroft, Polmont, Redding and Torrance, and Wester Balgrochan ; while smaller villages and hamlets are Airth, Auchinmully, Baldernock, Balmore, Balquhatston Row, Banton, Barleyside, Birdstone, Blackbraes, Blanefield, Bucklyvie, Burnbridge, Burn Row, Camelon, Campsie, Carron, Carronhall, Carronshore, Denny-Loanhead, Dunmore, Fintry, Gargunnock, Glen, Gonochan, Killearn, Kinnaird, Larbert, Longdyke, Newton, East Plean, Raploch, Rumford and Craigs, East Shieldhill, Skinflatts, Torbrex, Torwood, Wallacetown and Standrig, and Whins of Milton. Portions of Causewayhead, Kippen, and Linlithgow Bridge are also included.

The civil county contains the 21 entire *quoad civilia* parishes of Airth, Alva, Baldernock, Balfron, Bothkennar, Buchanan, Campsie, Denny, Dunipace, Drymen, Falkirk, Fintry, Gargunnock, Killearn, Kilsyth, Larbert, Muiravonside, Polmont, Slamannan, St Ninians, and Strathblane, and portions of Kippen, Logie and Lecropt (Perthshire), New Kilpatrick (Dumbartonshire), and Stirling (Clackmannanshire). The *quoad sacra* parishes of Bannockburn, Banton, Bonnybridge, Bridge of Allan, Bucklyvie, Camelon, Carronshore, Grangemouth, Haggs, Marykirk (Stirling), Milngavie, Plean, and Sauchie are also included ; and there is a mission station at Shieldhill and Blackbraes in the parish of Polmont. Ecclesiastically 10 of those parishes are in the presbytery of Stirling, and 3 in the presbytery of Dunblane, both in the synod of Perth and Stirling ; 8 are in the presbytery of Dumbarton, and 2 in the presbytery of Glasgow, in the synod of Glasgow and Ayr ; and 4 are in the presbytery of Linlithgow in the synod of Lothian and Tweeddale. There are 40 places of worship in connection with the Established Church, 23 in connection with the Free Church, 26 in connection with the United Presbyterian Church, 2 in connection with the Congregational Church, 2 in connection with the Evangelical Union Church, 3 in connection with the Baptist Church, 2 in connection with the Wesleyan Methodist Church, 4 in connection with the Episcopal Church, and 5 in connection with the Roman Catholic Church. In the year ending September 1883 there were in the county 97 schools, of which 76 were public, with accommodation for 20,086 children. These had 19,448 on the rolls, and an average attendance of 14,532. The staff consisted of 171 certificated, 49 assistant, and 120 pupil, teachers.

The county is governed by a lord-lieutenant, a vice-lieutenant, 20 deputy-lieutenants, and 156 justices of the peace. The sheriff-principal is shared with Dumbarton and Clackmannan ; and there are two sheriff-substitutes, one at Stirling and one at Falkirk. The former has jurisdiction over the parishes of Alva, Baldernock, Balfron, Buchanan, Campsie, Denny, Drymen, Dunipace, Fintry, Gargunnock, Killearn, Kippen, Kilsyth, Lecropt, Logie, New Kilpatrick, St Ninians, Stirling, and Strathblane, and holds ordinary courts every Tuesday and Thursday, and small debt courts every Thursday ; the latter has jurisdiction over the parishes of Airth, Bothkennar, Falkirk, Larbert, Muiravonside, Polmont, and Slamannan, and holds ordinary courts every Monday and Wednesday, and small debt courts every Wednesday. A small debt circuit court is held at Lennoxtown on the second Wednesdays of February, May, August, and November. Justice of peace small debt courts are held at Stirling on the first Monday of every month, and quarter sessions are held on the first Tuesdays of March, May, and August, and the last Tuesday of October. The police force, exclusive of the burgh of Stirling, consists of 52 men (1 to every 1335 of the population), under a chief constable with a salary of £300 a year. There are about 1100 apprehensions every year, and there are prisons at Stirling and Falkirk. In 1883 the average number of registered poor was 1514 with 994 dependants, and 48 casual poor with 55 dependants. Two of the parishes are unassessed ; and of the others, Stirling, St Ninians, and Kilsyth form Stirling Poor-law Combination, Falkirk has a poorhouse for itself, Muiravonside belongs to Linlithgow Combination, and Kippen is in Dumbarton Combination. The proportion of illegitimate births averages about 6·5 per cent., and the average death-rate is about 18·2. Connected with the county is a battalion of rifle volunteers, and the 3d battalion of the Princess Louise's Argyll and Sutherland Highlanders, formerly the Highland Borderers Light Infantry Militia, both battalions having their headquarters at Stirling. The county returns one member to serve in parliament, and the parliamentary constituency in 1884-85 was 3442. Another member is shared by Stirling burgh with Dunfermline, Inverkeithing, Culross, and Queensferry, and a third by Falkirk with Linlithgow, Lanark, Hamilton, and Airdrie ; but under the Redistribution Bill at present before parliament, it is proposed to assign a member to Stirling and Falkirk alone. For parliamentary purposes the parish of Alva is united to Clackmannan. Valuation (1674) £9024, (1815) £218,761, (1855) £269,640, (1876) £370,023, (1885) £428,569, 11s. 9d., the last three being exclusive of railways, canals, and tramways, which were valued in 1885 at £128,640. Pop. of registration county, which takes in part of Stirling parish from Clackmannanshire and part of Kippen from Perthshire, and gives off part of New Kilpatrick to Dumbartonshire, and parts of Logie and Lecropt to Perthshire, (1871) 93,345, (1881) 106,883 ; civil county (1801) 50,825, (1811) 58,174, (1821) 65,376, (1831) 72,621, (1841) 82,057, (1851) 86,237, (1861) 91,926, (1871) 98,218, (1881) 112,443, of whom 56,147 were males and 56,296 females. These were distributed into 23,656 families occupying 22,361 houses, with 67,514 rooms, an average of 1·66 persons to each room. Of the 112,443 inhabitants in 1881, 1422 men and 674 women were connected with the civil or military services or with professions, 673 men and 4015 women were domestic servants, 3305 men and 48 women were connected with commerce, 3932 men and 906 women were connected with agriculture and fishing, and 23,104 men and 5065 women were engaged in industrial handicrafts or were dealers in manufactured substances, while there were 20,175 boys and 20,110 girls of school age. Of those engaged in farming and fishing, 3673 men and 904 women were concerned with farming alone ; and of those connected with industrial handicrafts, 10,316 men and 152 women were concerned with the working of mineral substances.

The county belonged anciently to the Caledonian Damnonii, and was afterwards partly included in the Roman province of Valentia, partly in that of Vespasiana. Still later it lay on the debatable land between the Angles, the Picts, and the Britons of Strathclyde ; became the seat of a Scotic kingdom, thereafter part of Cumbria, and finally almost the central point of modern Scotland ; and associated with many of the leading events in its history. Few counties can boast of being the scene of so many decisive battles as this—Stirling Bridge, 1297 ; Falkirk, 1298 ; Bannockburn, 1314 ; Sauchie, 1488 ; Kilsyth, 1645 ; and the second battle of Falkirk, 1746. The antiquities are both numerous and important, but for them reference may be made to the articles on the different parishes and towns and the others therein referred to. The Roman Wall, between the Firths of Forth and Clyde, which passed through portions of the county on the S, is separately noticed (see ANTONINUS' WALL), as is also ARTHUR'S OVEN.

See 'The Agriculture of Stirlingshire,' by James Tait, in *Trans. Highl. and Ag. Soc.* (1884), and works cited under STIRLING.

Stitchel, a village and a parish of N Roxburghshire. The village occupies a beautiful site, 405 feet above sea-level, and 3¼ miles NNW of Kelso, under which it has a post office. Consisting of one old-fashioned street, it has greatly decayed since the close of last century, when it was famous for the open-air preachings or 'Holy

Fairs' of its Secession church; and it was the first place in the county visited by the cholera in 1832.

The parish, united since 1640 to Hume in Berwickshire, is bounded SE by Ednam, and on all other sides by Berwickshire, viz., S and W by Nenthorn, N by Hume, and NE by Eccles. Its utmost length, from ENE to WSW, is 3¼ miles; its breadth varies between 1⅛ and 2⅛ miles; and its area is 2803⅝ acres, of which 5 are water. Eden Water, a capital trout stream, winds 1⅞ mile east-by-northward along the southern boundary, and forms, near Newton-Don, the beautiful waterfall, 40 feet high, of Stitchel Linn. Sinking to close on 200 feet above sea-level, the surface thence rises north-north-westward, till at Sweethope Hill it attains a maximum altitude of 731 feet. The rocks are chiefly eruptive and Devonian; and the soils are variously argillaceous, loamy, and gravelly. Some of the land is naturally wet and cold, but all has been greatly improved, and most is in a state of high cultivation. In 1628 the lands of Stitchel were sold by Sir John Gordon of Lochinvar (afterwards Viscount Kenmure) to Robert Pringle, whose grandson received a baronetcy in 1683, and whose great-great-grandson, Sir John Pringle, Bart. (1707-82), an eminent physician and natural philosopher, was born at Stitchel House. About 1855 the estate was purchased by the Bairds; and its present proprietor, George Alexander Baird, Esq. of Stitchel and Strichen (b. 1861; suc. 1870), holds 4339 acres in Roxburgh and 11,248 in Aberdeen shire, valued at £8375 and £9049 per annum. His seat, Stitchel House, 5 miles NNW of Kelso, is a large and splendid edifice of 1866, whose tower, 100 feet high, commands a magnificent view of the country for 30 miles round. The grounds possess much beauty. Stitchel is in the presbytery of Kelso and the synod of Merse and Teviotdale; the living is worth £401. The parish church contains 320 sittings, as also does the new U.P. church, this being an Early Decorated building, erected in 1877 at a cost of £2000. Stitchel public school, with accommodation for 113 children, had (1884) an average attendance of 38, and a grant of £35, 1s. Valuation (1864) £4196, 5s. 6d., (1884) £4765, 2s. 5d. Pop. (1801) 506, (1831) 434, (1861) 425, (1871) 388, (1881) 342.—*Ord. Sur.*, sh. 25, 1865.

Stobbs. See Gorebridge.

Stobbs Castle. See Stobs Castle.

Stobcross. See Glasgow.

Stobhall, a mansion in Cargill parish, Perthshire, on a high narrow tongue of land, on the wooded left bank of the river Tay, 8 miles N by E of Perth. It is an old edifice, bearing date 1578, but supposed to have been founded fully 400 years earlier. The chapel—probably once the banquet-hall—has a curious painted roof, with representations of all the kings of the earth; and its windows are now filled with stained heraldic glass. The gardens are a miniature of those at Drummond Castle; and many of the trees on the estate are of great size and beauty. By his marriage, in 1360, with the daughter and co-heiress of Sir William de Montifex, justiciar of Scotland, the estate went to Sir John Drummond, and has continued in the possession of his descendants, the mansion being now the residence of Lady Willoughby de Eresby's factor.—*Ord. Sur.*, sh. 48, 1868. See Drummond Castle and chap. xxviii. of T. Hunter's *Woods and Estates of Perthshire* (1883).

Stobhill, a *quoad sacra* parish of Edinburghshire, whose church stands 5 furlongs NNE of the village and station of Gorebridge. Pop. (1871) 2447, (1881) 3065, of whom 367 were in Borthwick, 1113 in Cockpen, 575 in Newbattle, and 1010 in Temple.

Stobo (anc. *Stoboc*, 'the hollow of stobs or stumps'), a parish of central Peeblesshire, containing Stobo station (with a post and railway telegraph office) on the Peebles branch of the Caledonian, 12½ miles E by N of Symington Junction and 6½ WSW of Peebles. The present parish since 1742 has comprehended part of the ancient parish of Dawick. It is bounded N by Newlands, NE by Lyne and Peebles, E by Manor, S by Drummelzier, SW and W by Broughton, and NW by Kirkurd. Its utmost length, from E to W, is 5¼ miles; its utmost breadth, from N to S, is 4⅞ miles; and its area is 10,372⅛ acres, of which 71 are water. From the influx of Biggar Water in the SW to the influx of Lyne Water in the E, the Tweed has here a north-easterly course of 6⅜ miles—3⅛ miles east-north-eastward along the Drummelzier border, 2⅜ miles north-north-eastward across the interior, and 1¼ mile east-north-eastward along the Manor border. Biggar Water flows 1¼ mile eastward along the Broughton boundary, and Lyne Water 4¾ miles south-eastward along the Newlands, Lyne, and Peebles boundary; whilst the Tweed's chief affluents from Stobo itself are Hopehead or Weston Burn, rising on Broughton Heights at an altitude of 1550 feet, and running 4⅞ miles south-eastward through the interior, and Harrow Burn, running 2¾ miles south-eastward to its mouth near the parish church. Sinking in the extreme E, at the confluence of Lyne Water with the Tweed, to close on 550 feet above sea-level, the surface thence rises to 1266 feet at Quarry Hill, 1495 at Torbank Hill, 1760 at Penvalla, and 1872 at Broughton Heights, which culminate on the meeting-point of Stobo, Broughton, and Kirkurd parishes. The valley of the Tweed here, whilst possessing much natural beauty, is rich in artificial embellishment; and some of the hills are green, but most are covered with heath, all those of the western district forming a continuous upland, fit only for sheep pasture. Greywacke, more or less schistose, is the prevailing rock; and coarse clay slate, of a dark blue colour, and well adapted to roofing purposes, was quarried so long ago as 1661. The soil on the hills is mostly moorish; and that in the vales presents no little variety, but is generally a light fertile loam, incumbent on gravel. Barely one-sixth of the entire area is in tillage; about 500 acres are under wood; and nearly all the remainder is hill-pasture. The 'Black Dwarf,' David Ritchie (1740-1811), was born at Slate Quarries (see Manor). Antiquities are two cairns and two Caledonian standing-stones on Sheriffmuir; the three hill-forts of Kerr's Knowe, Hog Hill, and Dreva Craig; and the site of a feudal keep, called the Lour, on the S side of the Tweed. Stobo Castle, near Stobo station and the Tweed's left bank, is a spacious castellated pile, with battlements and round flanking towers, erected in 1805-11 from plans by J. & A. Elliot. The grounds are well laid out and finely wooded, four of the trees (an oak, ash, sycamore, and beech) being described among the 'old and remarkable trees of Scotland' in *Trans. Highl. and Ag. Soc.* for 1880-81. The barony of Stanhope and Stobo, once the property of the Murrays, was purchased in 1767 for £40,500 by James Montgomery, who, having in 1775 been created chief baron of the exchequer in Scotland, received a baronetcy in 1801. His grandson, Sir Graham Graham-Montgomery, third Bart. (b. 1823; suc. 1839), Conservative M.P. for Peeblesshire 1852-80, holds 18,172 acres in Peebles and 2336 in Kinross shire, valued at £6945 and £3130 per annum (see Kinross). Two other proprietors hold each an annual value of more than £500. Stobo is in the presbytery of Peebles and the synod of Lothian and Tweeddale; the living is worth £244. The parish church, 9 furlongs NNE of the station, on a rising-ground beside the Tweed, is an interesting old edifice, consisting of chancel, nave, S porch, and square saddle-roofed tower with a bell-cote. Portions of it are Norman or Romanesque, as old as or older than the 13th century; but the general features belong to the Pointed style of architecture. The jougs still hang on the porch; and in the N wall of the chancel is a canopied tomb, whose every stone has a 'W' carved on it, and within which a skeleton, four German coins, and a Scottish one, apparently of James V. (1537), were found in 1863, when the church was well restored at the cost of Sir Graham Montgomery. Stobo church is an example of what is called a 'plebania' or mother church, having subordinate churches or chapelries within its territory. These were Dawick, Drummelzier, Kingledoors, Tweedsmuir, Broughton, Glenholm, and Lyne.

The parson was styled Dean, and in early times the office was hereditary. We find mention made of Stobo in reference to church matters in 1116, when the rectory of Stobo was converted into a prebend of Glasgow; and of all the prebends of Tweeddale, Stobo was the most valuable. 'The rights of the manor of Stobo,' says Chalmers in his *Caledonia*, 'were as fiercely contested as the sovereignty of Scotland.' The public school, with accommodation for 54 children, had (1884) an average attendance of 47, and a grant of £42, 16s. 6d. Valuation (1857) £3803, 7s. 4d., (1884) £5066, 2s. Pop. (1801) 338, (1831) 440, (1861) 478, (1871) 459, (1881) 467.—*Ord. Sur.*, sh. 24, 1864.

Stobs Castle, a fine mansion in the upper section of Cavers parish, Roxburghshire, near the right bank of Slitrig Water, and ¾ mile S by E of Stobs station on the Waverley route of the North British railway, this being 4 miles S of Hawick, under which there is a post office of Stobs. In 1666 Gilbert Eliott of Stobs, the grandson of 'Gibby wi' the gouden gartins,' received a baronetcy; and his youngest great-grandson, George Augustus, K.B. (1718-90), the gallant defender of Gibraltar, was created Lord Heathfield in 1787. Sir William Francis-Augustus Eliott, eighth Bart. (b. 1827; suc. 1864), holds 16,475 acres in the shire, valued at £8934 per annum. See WELLS.—*Ord. Sur.*, sh. 17, 1864.

Stockbridge. See EDINBURGH and COCKBURNSPATH.

Stockbriggs, an estate, with a mansion, in Lesmahagow parish, Lanarkshire, on the river Nethan, 3¼ miles SSW of Lesmahagow village. It was purchased from the Alstons in 1879 by James Waddell, Esq.

Stoer, a *quoad sacra* parish in Assynt *quoad civilia* parish, SW Sutherland, whose church (1829) stands near the shore of the Bay of Stoer, 5 miles SSE of the Point of Stoer and 6½ NW of Lochinver. There are a post office of Stoer under Lairg, a Free church, and a public school. Pop. of parish (1871) 1507, (1881) 1391.—*Ord. Sur.*, sh. 107, 1881.

Stonebyres, a mansion in Lesmahagow parish, Lanarkshire, 3 furlongs from the left bank of the Clyde, and 3 miles W of Lanark. A lofty semi-Baronial edifice, it was mainly rebuilt by the late James Monteath, Esq., from designs by Mr Baird of Glasgow; but its oldest portion, embraced in the modern structure, is ascribed to the 14th century, and has walls 8 to 10 feet high. The ancient banqueting-hall is the finest perhaps in the county. The estate—comprising now 825 acres, of £1091 annual value—was held by the Weirs or Veres from the 15th century till 1842, when it was sold to Mr Monteath. He was succeeded by his kinsman, Gen. Sir Thomas Monteath Douglas, K.C.B. (1787-1868), whose only surviving daughter in 1861 married Sir William Monteath Scott, Bart. of ANCRUM. Stonebyres Linn, the last and broadest of the Falls of CLYDE, 1⅛ mile below Lanark Bridge, bears a general resemblance to CORRA LINN, but is commonly admitted to be of a less striking character. Like Corra Linn it encounters two ledges of rock, but in spates the water seems to fall in one unbroken sheet from a height of 70 or 80 feet into the deep 'Salmon Pool,' beyond which the fish can never ascend. Seen from below, the dark shelving rocks and the wooded banks of the stream present an exquisite contrast to the snowy foam of the cataract.—*Ord. Sur.*, sh. 23, 1863.

Stonefield, a thriving seat of industry and population in Blantyre parish, Lanarkshire, 2½ miles NW of Hamilton and 8¼ SE of Glasgow, under which it has a post office. Its Established chapel of ease was founded in 1878, and contains 900 sittings. Pop. (1871) 395, (1881) 4511, of whom 2164 were in Stonefield proper, 331 in Baird's Rows, 1321 in Dixon's Rows, and 695 in Springwell.—*Ord. Sur.*, sh. 23, 1865.

Stonefield, a modern mansion in South Knapdale parish, Argyllshire, on the W shore of Loch Fyne, 2 miles N of Tarbert. Its owner, Colin George Campbell, Esq. (b. 1811; suc. 1857), holds 35,186 acres in the shire, valued at £5813 per annum.—*Ord. Sur.*, sh. 29, 1873.

Stonefield, a hamlet in Muckairn parish, Argyllshire, on the S shore of Loch Etive, 3½ miles WNW of Taynuilt station.

Stonehaven (commonly Stanehive), a post-town, seaport, and seat of some trade, and the county town of Kincardineshire. It has a railway station on the Caledonian and North British line from Perth to Aberdeen, and by rail is 16 miles SSW of the latter city. By road it is 10 miles NNE of Bervie. Its site is the head of the bay of the same name at the influx of the Carron and Cowie, and the place consists of an old town and a new, of which the former claims to be a burgh of barony. The old town, in the parish of Dunnottar, on the S bank of the Carron, consists chiefly of two main streets with closes branching off, and is irregularly built. It is inhabited mostly by fishermen. The new town, which is now the more important, occupies the point of land to the NW at the junction of the Carron and Cowie, in the parish of Fetteresso. It is well built, and has its streets, laid off at right angles, passing out from a central square. A bridge across the Carron connects the two towns, and another carries the N road over the Water of Cowie. In the old town the only thing of note is the old well and the public barometer set up in 1852. In the new town there is a market house in the square, erected in 1827, with a steeple 130 feet high. In Allardyce Street is a new town-hall in the Italian style, erected in 1877-78 at a cost of £4000. The hall contains a picture of 'The Coming Storm,' presented by the architect, Mr W. Lawrie, Inverness. Besides a public hall, it comprises news, billiard, and reading rooms. The county buildings contain court-rooms and other accommodation for the sheriff courts. The county prison, altered, enlarged, and legalised in 1867, has been, since the passing of the Prisons Act, used only as a 14 days prison, prisoners for longer periods being sent to Aberdeen. The Established churches are noticed under the parishes of DUNNOTTAR and FETTERESSO. In the town itself are a Free church, a U.P. church (1803; 400 sittings), the Roman Catholic church of the Immaculate Conception (1877; 80 sittings), and St James's Episcopal church (1875-77; 400 sittings), a Norman and Early Transition edifice, built at a cost of £3600 from designs by Dr Rowand Anderson, but still wanting chancel and spire. Stonehaven public school, under the Fetteresso school board, on a high bank to the NW, was built in 1876 at a cost of £4000, and contains accommodation for 400 children. Donaldson's Free School, which at one time provided free education for a number of children, is now closed, and the benefaction managed by the school board. The harbour, consisting of two basins, was originally a small natural bay to the S of the mouth of the Carron, sheltered on the SE by Downie Point. The old harbour and quay to the N date originally from very early times, a grant of them having been obtained by the feuars from the Earl Marischal in the beginning of the 17th century. The situation is convenient, but the harbour itself was poor, till, under an Act of Parliament obtained in 1825, it was vested in harbour commissioners, and improvements executed in 1826, the sea wall and breasting of the new harbour to the S being built, and other improvements made, from designs by Mr Robert Stevenson. Subsequently jetties were added so as to protect vessels in the new basin from damage during storms. During these operations a large rock to the S, giving name to the place—Stane-hive or Stone-haven or harbour—was removed. The whole harbour area is about 5 acres. The improvements have cost about £9000, and further extension has recently been proposed. There are good leading lights. There are four vessels belonging to the port—none of them over 100 tons—which are engaged in the coasting trade or in carrying cargoes of herring to the Baltic ports. The harbour has become very important in connection with the herring-fishing industry, over 100 boats fishing from the port every season. The 102 boats thus engaged in 1884 had a total catch of 13,770 crans. In 1883, 80 first-class,

50 second-class, and 69 third-class boats, employing 485 resident fisher men and boys, were in Stonehaven fishery district, which includes Stonehaven itself and the villages of Shieldhill, Catterline, Crawton, Cowie, Stranathrow, and Skateraw; while the number of boats fishing within it were 110, employing 688 fisher men and boys, and 422 other persons. The value of the boats belonging to the district in the same year was £9115, of the nets £10,334, and of the lines £2828. The harbour revenue for 1884 was £958. The old town has the status of a burgh of barony, though the claim is disputed. The Act of Parliament of 1607, ratifying the change of the county town from KINCARDINE, speaks of it as 'the burgh of Stanehive,' but the original Act of 1600 merely calls it 'the Stanehive.' From 1624 the superior—the Earl Marischal—granted the feuars the privilege of nominating two persons to serve as bailies. After the forfeiture of the Marischal family the feuars elected managers, but from 1797 till 1812, under Lord Keith, the old custom was re-established. In consequence of quarrels it was discontinued from 1812 to 1823, but was then restored, and now the council of the old town consists of 2 bailies, a dean of guild, and 3 councillors. The present superior of the old town is Lady G. A. H. Elphinstone, and of the new town, Alexander Baird of Urie. The affairs of the new town are attended to by a provost, 2 bailies, and 7 councillors. The manufacture of cotton and linen, at one time extensively carried on, has long been extinct; and the only industries in the neighbourhood now, apart from fishing, are a large distillery at Glen Urie, and a small wool mill, both, however, outside the town. In the town there are a tannery and brewery. There are a considerable number of summer visitors every year. Stonehaven has a head post office, with money order, savings' bank, insurance, and telegraph departments, branch offices of the Bank of Scotland, North of Scotland, and Town and County Banks, a branch of the National Security Savings' Bank, agencies of 16 insurance companies, and 2 good hotels. There are also a subscription library, a literary society, a choral union, cricket and football clubs, a masonic lodge (St John's, No. 65), a court of the Ancient Order of Foresters, a Good Templar lodge, and the usual religious and philanthropic associations. Water and gas are supplied by private joint-stock companies. The Independent *Stonehaven Journal* (1845) is published every Thursday. There is a weekly market on Thursday, and cattle fairs on the Thursday before Candlemas, on the third Thursday of June, on the Thursday before Lammas, on the second Thursday of October, and on the Thursday before Christmas, all *o. s.*; and there are hiring fairs on the day before 26 May, and the day before 22 Nov., or if those days be Mondays, on the Saturdays before. Sheriff and small debt courts for Kincardineshire are held every Wednesday during session, and there are justice of peace courts on the first Saturday of every month. Pop. of entire town (1841) 3012, (1861) 3009, (1871) 3396, (1881) 3957, of whom 1830 were males and 2127 females. Houses (1881) 647 inhabited, 25 uninhabited, and 9 being built. Of the whole population 1708 were in the old town and 2249 in the new town, and of the inhabited houses 199 were in the former and 448 in the latter.—*Ord. Sur.*, sh. 67, 1871.

Stonehaven Bay is the shallow depression of the coast near the head of which Stonehaven stands, and is bounded by Garron Point on the N and Downie Point on the S. It measures fully 1½ mile between these from NNW to SSE, and is ⅞ mile deep at right angles to this. The depth along this line is from 30 to 50 fathoms, and the anchorage is good, the bottom being a stiff clay.

Stonehouse, a town and a parish in the Middle Ward of Lanarkshire. The town, which lies 450 feet above sea-level, near the right bank of Avon Water, by road is 3¾ miles ENE of Strathaven and 7¼ SSE of Hamilton, whilst its station, on a branch-line of the Caledonian, is 3¼ miles SSW of Ayr Road Junction and 18¼ SE of Glasgow. Mostly a growth of the last half century, it is a fine, airy, thriving place; and has long been kept in a neat cleanly condition. It comprises a main street extending 7 furlongs south-westward along the highroad from Edinburgh to Ayr, two new streets built on a specified plan, and some small lanes or subordinate parts. Its houses, 50 years ago, were mostly of one story and generally thatched; but now not a few are substantial, well-built, slated, two-storied structures. The town's rapid advances, both in character and population, arose from the liberal encouragement given to feuars and builders by the late Robert Lockhart, Esq. of Castlehill. A large portion of the inhabitants are miners, weavers, and tradesmen. Stonehouse has a post office, with money order, savings' bank, and telegraph departments, a branch of the Union Bank, 9 insurance agencies, a gas company, a public library, and fairs on the last Wednesdays of May, July, and November. Pop. of town (1841) 1794, (1861) 2585, (1871) 2623, (1881) 2615, of whom 1331 were males. Houses (1881) 511 inhabited, 31 vacant, 4 building.

The parish contains also Sandford village, at the SW border, 3½ miles SW of the town and 1½ mile SE of Strathaven. It is bounded NE and E by Dalserf, SE by Lesmahagow, SW by Avondale, W by Avondale and Glassford, and NW by Hamilton. Its utmost length, from N to S, is 5⅝ miles; its utmost breadth is 2⅝ miles; and its area is 6311½ acres, of which 70½ are water. AVON Water winds 4⅛ miles north-north-eastward along the Avondale and Glassford boundary, 2 north-north-eastward across the interior, and 2¼ north-north-westward along the Dalserf boundary. It thus has a total course here of 8⅛ miles, though the point where it first touches and that where it quits the parish are only 5 miles distant as the crow flies. KYPE Water flows to it 3⅝ miles west-north-westward along all the south-western border, and CANDER Water 2½ miles north-north-westward along the southern half of the Dalserf boundary. Sinking in the extreme N to close on 200 feet above sea-level, the Vale of Avon Water is very romantic, especially below the town of Stonehouse. From it the surface rises gradually to 533 feet near Crofthead, 642 at Udston, and 734 near Hazeldean. The parish thus mainly consists of gentle ascents, higher in the S than in the N, but nowhere hilly, and nearly all subject to the plough. Its general appearance is pleasing and rich. Wood was formerly scarce, but is now abundant enough to afford both shelter and embellishment. The rocks belong to the Carboniferous formation, with protrusions of trap. Prime limestone has been largely worked; and ironstone of excellent quality occurs in thin beds and in round isolated masses above the limestone. Coal is abundant, but has been chiefly used in the lime-works; sandstone, suitable for building, is also plentiful; and the trap is of a quality well adapted for road-metal. A sulphurous spring, called Kittymuir Well, situated on the banks of the Avon, long enjoyed some medical repute for cutaneous diseases. The only noticeable antiquities are vestiges of two old castles, called Coat Castle and Ringsdale Castle, surmounting cliffs on the banks of the Avon, but unstoried by either record or tradition. William Hamilton, D.D. (1780-1835), an eminent minister of the Church of Scotland, was a native. Major-General G. A. Lockhart, C.B., of Castlehill, owns more than one-half of the parish, 2 lesser proprietors holding each an annual value of £500 and upwards, 11 of between £100 and £500. Stonehouse is in the presbytery of Hamilton and the synod of Glasgow and Ayr; the living is worth £295. The parish church is a handsome modern building, with a neat spire, and upwards of 900 sittings. The Free church, rebuilt in 1874, is a good Perpendicular structure, with a spire 114 feet high, and nearly 700 sittings. The U.P. church was rebuilt in 1879. Four public schools—Camnethan Street, Greenside Infant, Sandford, and Townhead—with respective accommodation for 178, 143, 100, and 253 children, had (1884) an average attendance of 104, 90, 76, and 133, and grants of £79, 6s., £78, 15s., £68, 18s. 3d., and £171, 3s. Valuation (1860) £9965, (1885) £13,301. Pop. (1801) 1259, (1831)

2359, (1861) 3267, (1871) 3177, (1881) 3173.—*Ord. Sur.*, sh. 23, 1865.

Stonelaw. See RUTHERGLEN.

Stoneridge or **Stainrigg,** a mansion in Eccles parish, Berwickshire, 6 miles NW of Coldstream.

Stoneykirk, a post-office village and a coast parish in the Rhinns of Galloway, SW Wigtownshire. The village stands 2 miles N by W of Sandhead, and 5¾ SSE of Stranraer.

The parish, containing also the larger village of SANDHEAD, comprises the ancient parishes of Stephenkirk (Steeniekirk and Stoneykirk), CLACHSHANT, and Toskerton or KIRKMADRINE—all three united about the middle of the 17th century. It is bounded N by Inch, NE by Old Luce, E by Luce Bay, S by Kirkmaiden, W by the Irish Channel, and NW by Portpatrick. Its utmost length, from N to S, is 8¼ miles; its breadth decreases southward from 6⅝ to 2⅝ miles; and its area is 32$\frac{5}{16}$ square miles, or 20,769¼ acres, of which 1274 are foreshore and 14½ water. The E coast, 6¾ miles in extent, to the N of Sandhead is fringed by the Sands of Luce, a continuous belt of sandy foreshore, 3 to 5½ furlongs broad. S of Sandhead it is stony but still low, attaining a maximum altitude of 70 feet above sea-level. The W coast, measuring 8¼ miles, is mostly bold and rocky, and in places precipitous, rising rapidly to 125 feet at Grennan Point, 150 at Ardwell Point, 384 at Cairnmon Fell, and 437 near Cairngarnoch. It is slightly indented by Ardwell Bay, Cairgarroch Bay, and Port-of-Spittal Bay, and several minor inlets. The interior ascends slowly from the E, more abruptly from the W, abounds in inequalities and tumulations, and culminates on Barmore Hill at an altitude of 463 feet above sea-level. Piltanton Burn runs 3⅝ miles east-by-northward along all the Inch boundary; and two or three considerable burns rise near the W coast, and run eastward to Luce Bay. The rocks are chiefly Silurian. The soil of about 650 acres on the E coast, and of 60 on the W, is barren sand; that of the greater part of the eastern and southern districts is light, dry, sharp, and tolerably fertile; and that of much of the western district is heavy vegetable mould, reclaimed from heath and moss. Rather more than one-ninth of the entire area is pastoral or waste; about 370 acres are under wood; and the rest of the land is in tillage. The principal antiquities are noticed under ARDWELL, BALGREGGAN, and GARTHLAND. A prominent natural curiosity is the Goodwife's Cave, situated near Port Float, and yielding a very remarkable echo. Five proprietors hold each an annual value of £500 and upwards. Stoneykirk is in the presbytery of Stranraer and the synod of Galloway; the living is worth £434. The parish church was built in 1827 at a cost of £2000, and is a handsome Gothic edifice, containing 660 sittings. There is also a Free church; and four public schools—Ardwell, Meoul, Sandhead, and Stoneykirk—with respective accommodation for 160, 70, 117, and 141 children, had (1884) an average attendance of 86, 59, 74, and 73, and grants of £68, 8s., £65, 4s. 6d., £63, 15s., and £74, 15s. 6d. Valuation (1860), £14,727, (1885) £21,360. Pop. (1801) 1848, (1831) 2966, (1861) 3228, (1871) 2993, (1881) 2766.—*Ord. Sur.*, sh. 3, 1856.

Stoneywood, a village in Newhills parish, Aberdeenshire, on the right bank of the Don, 1 mile N of Auchmull. It has large paperworks, two schools, and an Established chapel of ease (1879; 800 sittings). Near it is Stoneywood House.

Stoop. See GREENBRAE.

Stormont, a district of Perthshire, bounded on the E by the Ericht, on the S by the Isla and the Tay, on the W by the Tay, and on the N by the frontier mountain-rampart of the Highlands, from the foot of Strathardle to a little distance S of the foot of Strath-Tummel. The district measures 14 miles in length from E to W, and about 7 or 8 in mean breadth. It comprehends the greater part of the parishes of Blairgowrie, Kinloch, Clunie, Caputh, and Dunkeld, all Lethendy, and about a third of Bendochy. For an exquisite combination of land, wood, and water, lowland expanses and Highland barriers, romantic glens and picturesque lochlets, this district, though excelled in its turn for other combinations, or for a higher perfection of some of the scenic elements, excels every other in even panoramic Perthshire. The best view of its brilliant surface and its numerous pretty lakes is obtained from the summit of Benachally, a considerable height on the mutual border of Caputh and Clunie; and a charming, though a less extensive and commanding, one, is obtained from the summit of Crag-Roman, a wooded eminence about 1 mile W of Blairgowrie. Stormont gave, in 1621, the title of Viscount in the peerage of Scotland to the ancestor of the Earl of Mansfield. See SCONE.

Stornoway, a parish containing a town of the same name, in Ross-shire, in the NE of the island of Lewis. It is bounded E by the Minch, S by the parish of Lochs, SW by the parish of Uig, and NW by the parish of Barvas. There is a compact main portion with a narrow peninsula running out eastward. The length of the mainland portion, from NNE at a point on the coast 9 miles S of the Butt of Lewis south-south-westward to the boundary with Lochs, is about 20 miles; and the extreme breadth is about 6 miles. Some distance S of the centre of this at the town of Stornoway, an isthmus projects east-north-eastward between Broad Bay on the N, and Loch Stornoway on the S, for 3½ miles, and is at its narrowest point on the E only about 200 yards wide; and from this neck the Peninsula of Eye extends north-eastward almost parallel to the coast-line of the compact main portion of the parish for 7 miles with an average breadth of 2½ miles. The total area is 67,651·862 acres, of which 2145·419 are water, and 2282·275 foreshore. The coast-line has many indentations, and though there are some fine sandy beaches, the greater portion of it consists of bold shelving rocks or precipitous cliffs. There are a number of caves, one of which, the Seal Cave, at Gress, about 8 miles N of the town of Stornoway, is said to be inferior only to the Spar Cave in Skye. The chief inlets are BROAD BAY, Loch Stornoway or Stornoway Harbour, BAYBLE Bay, and TOLSTA Bay. STORNOWAY HARBOUR lies to the S of the isthmus already described, and is a triangular space extending 5 miles north-westward from a line drawn from the S end of Eye Peninsula to the mouth of Loch Ranish, along which line the distance is also 5 miles. The inner portion is thoroughly sheltered, and affords good and safe anchorage. The other inlets are separately noticed. From the coast the surface level of the parish rises gradually westward to the watershed of the island, where a height of 800 feet is reached at Monach and 900 at Ben Barvas. Fresh-water lakes are very numerous, but they are mere lochans, and notwithstanding their number do not cover a large proportion of the area. The principal streams are the Gress, Laxdale, and Creed, the last being the fourth best fishing stream in the island of Lewis. The soil is generally mossy, but there are patches of sand, gravel, and loam. The sub-soil is a red till, so hard that it can hardly be broken even with a pick; and the underlying rocks are Laurentian gneiss, with patches of a Cambrian conglomerate along the NW side of Broad Bay, across the isthmus at the S end of it, and in the S end of the Peninsula of Eye. Little more than a narrow belt along the shore was formerly under cultivation, the rest of the surface being a dismal expanse of moor and bog, till after the island passed into the possession of Sir James Matheson (1796-1878) in 1844, when large tracts were reclaimed and improved. Ten out of twelve of the large holdings in this parish are the only farms in Lewis on which regular rotation and systematic cultivation are carried out. The rentals of these twelve farms vary from £35 to £320, the total amount being £1500. Sir James also brought about great improvements in cattle rearing, the animals in the Stornoway district being mostly Ayrshires or crosses, much superior to the poor Highland cattle of the rest of the island. There were in the parish, in 1880, 950 crofters paying a rental of £2419, 19s. 7d. The principal mansion is Lews or Stornoway Castle, which stands at the head of Stornoway

Harbour, on an eminence to the W of the town, and occupies the site of Seaforth Lodge, the old mansion of the Mackenzies of Seaforth. It is a castellated building in the Tudor style, measuring 170 feet along the principal face to the E, and 153 from E to W. The octagon tower reaches a height of 94 feet, and the square flag tower 102 feet. There are 76 rooms, and the whole was completed in 1870 at a cost of £40,000. The policies were reclaimed at a cost of £48,838, from very uneven and rugged ground, but they are now so beautiful and well laid out that both gardens and grounds compare favourably with any in Scotland. They contain a fine monument erected in memory of Sir James. (See ACHANY.) At the head of the Harbour stands a small fragment of the old Castle Macnicol, which is said to have been built before the Norse conquest of the Hebrides, and to have been taken from the Nacnicols by a Scandinavian leader named Leod, from whom the Macleods of Lewis sprung. Near it was a small fort erected by Cromwell, the garrison of which, tradition says, were all slain by the people of the island.

The parish, which contains the ancient chapelries of Stornoway, Gress, and Eye,* and is divided ecclesiastically into Stornoway proper and the *quoad sacra* parish of KNOCK, is in the presbytery of Lewis and the synod of Glenelg, and the living is worth £233 a year, The churches in the town are afterwards noticed, and there is an Established *quoad sacra* church at Knock, and Free churches at GARRABOST and BACK. Under the school board Aird, Back, Bayble, Knock, Laxdale, Sandwickhill, Tolsta, and Tong schools, with respective accommodation for 180, 270, 210, 121, 150, 160, 130, and 116 pupils, had (1884) an average attendance of 93, 179, 143, 90, 122, 102, 79, and 58, and grants of £69, 0s. 6d., £28, 13s. 11d., £112, 2s. 6d., £68, 11s., £80, 12s. 8d., £79, 8s. 7d., £59, 9s. 6d., and £30, 15s. There is a chemical work at Garrabost, and the other industries are noticed in connection with the town. The villages are Back, Bayble, Coll, Garrabost, Knock, Sandwick, Swordle, Tolsta, Tong, and Vatskir, all of which are separately noticed. The chief landowner is Lady Matheson. Six others hold each between £500 and £100, 19 hold each between £100 and £50, and there are a number with smaller amounts. Valuation (1860) £8673, (1885) £14,991, 3s. 1d., of which Lady Matheson has £5715, 1s. 3d. Pop. (1801) 2974, (1831) 5422, (1861) 8668, (1871) 9510, (1881) 10,389, of whom 4724 were males and 5665 females, while 7399 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 105, 106, 1858.

Stornoway, a police burgh, burgh of barony, seaport, and the chief town in the Outer Hebrides, in the parish just described, on the neck of land between Broad Bay and Stornoway Harbour, near the head of the latter. It is 22 miles in a straight line S by W of the Butt of Lewis, and by steamer 43 miles NW of Poolewe, 44 W of Lochinver, 51 WNW of Ullapool, 59 N by W of Portree, and 180 N by W of Oban. It was made a burgh of barony by James VI., but long remained a mere hamlet inhabited by poor fishermen, and though some improvement took place when attention was first directed to the Hebridean fisheries, its present importance is largely due to the exertions of its former proprietor, and more particularly to the energy and enterprise of Sir James Matheson, and the large sums of money which he cheerfully spent on improvements from which he could never expect a return adequate to his outlay. Before his time the place had been dependent for all communication with the mainland on a sailing mail packet, but on his various attempts to introduce steam communication, over £180,000 were lost; while £6000 were spent on the construction of a patent slip, £2225 for a quay for the steamers, and large sums on the erection of curing-houses, the introduction of gas and water, the construction of roads and bridges, and the erection of schools and payment of teachers' salaries. In late years, owing to the *Princess of Thule* and others of Black's novels, 'Styornoway has become known all over the English-speaking world, and, indeed, apart from the halo of romance which has thus been thrown around it, visitors are astonished to find such a flourishing place in such a remote corner.

The town now consists of ten fairly well-built streets, with a number of straggling suburbs. There is a good public hall—containing a news-room, a public library, and a meeting-room for the masonic lodge (Fortrose, No. 108)—a drill hall, a court house, a prison, a custom house, a sailors' home and dispensary, Established, Free (2), U.P., and Episcopal churches, and several schools. The parish church, built in 1794 and repaired in 1831, has 568 sittings. The English Free church was built in 1878, and contains 630 sittings. The U.P. church was erected in 1873, and the Episcopal church (St Peter), with sittings for 120, was erected in 1838; but neither of them calls for particular notice. At Lady Matheson's Seminary instruction is given in the ordinary branches, and in Ayrshire needlework, by a mistress and two pupil teachers; and education is also given at Nicolson's Institution —partly endowed by Sir James Matheson—and a Free Church school. Stornoway is a head port, including not only all the creeks and harbours of the Outer Hebrides, but also those of Skye and Mull; and the vessels belonging to it, in Jan. 1884, were 17 sailing vessels, whose total capacity was 927 tons, and 1 steamer, with a capacity of 66 tons. The harbour proper, at the upper end of Stornoway Harbour or Loch Stornoway, affords safe and ample anchorage, being sheltered on the S by Arnish Point, and on the W and N by high land. There is a good stone pier, with quays and breast-walls; while the patent slip is capable of accommodating ships of 1000 tons. Harbour affairs are managed by a body of 7 commissioners. Guidance is afforded to vessels entering or departing at night, by a lighthouse (1852) on Arnish Point, which shows a bright white revolving light every half-minute. This, which is visible at a distance of 12 nautical miles, illuminates two arcs, one towards the entrance to the loch, and the other up the harbour; and by means of reflection from glass prisms placed on the top of a beacon, it also marks a low-tide rock about 200 yards distant, by an apparent light. The tonnage of vessels entering all the harbours belonging to the port, from and to foreign and colonial ports and coastwise, with cargoes and ballast, was:—

	Entered.			Cleared.		
Year.	British.	Foreign.	Total.	British.	Foreign.	Total.
1860	26,277	539	26,816	23,854	214	24,068
1874	75,113	647	75,760	75,534	517	76,051
1881	95,497	550	96,047	90,378	255	92,633
1883	123,383	1187	124,570	119,949	1456	121,405

There is a custom house, with a collector and receiver of wreck, an examiner, and an out-door officer; but the dues are practically *nil*. The great article of export is fish, but cattle, horses, sheep, and wool are also despatched. The imports are miscellaneous, including coal, lime, slates, timber, dress-goods, and provisions. Steamers ply daily in summer and three times a week in winter between Stornoway and Ullapool; between Glasgow and Stornoway twice a week; between Granton and Stornoway every week in summer; and between Liverpool, Dundee, and Aberdeen, and Stornoway every week.

Stornoway is also the centre of the greatest of the Scottish fishery districts, embracing the whole of the Outer Hebrides. In 1883 the district contained 203 first-class boats, 419 second-class boats, and 476 third-class boats, finding employment for 4185 fisher men and boys and 3628 other persons. The value of the boats was £34,401, of the nets £25,742, and of the lines £9208. In the same year 1117 boats fished in the district, and employed 6387 men and boys and 2895 other persons, while there were 68,163 barrels of herrings cured. About half the number

* The ancient church of Stornoway was dedicated to St Lennan, that of Gress to St Aula, and that of Eye to St Columba.

of barrels exported go to St Petersburg, about a fourth to Stettin, and the rest to Danzig and Hamburg. In the same year the number of cod, ling, and hake cured was 444,490, while the value of the different kinds of fish sold fresh was over £34,000. There is a small boat-building yard, rope and sail works, a distillery, and a chemical work, which is, like that at Garrabost, intended for the manufacture of paraffin and lubricating oils from peat; and there are the usual local industries. The feuars and burgesses obtained in 1825 a charter from the superior, empowering them to elect 2 bailies and 6 councillors to manage the affairs of the community; but municipal affairs are now attended to by a senior magistrate, 2 junior magistrates, and 6 commissioners acting under the Police and General Improvement Act of 1862. The waterworks were transferred to the police commissioners in 1870, but gas is still supplied by a private company. The town has a head post office, with money order, savings' bank, insurance, and telegraph departments, branch offices of the British Linen Company, Caledonian, and National Banks, agencies of 19 insurance companies, and several good hotels. Among miscellaneous institutions may be noticed a company of Artillery Volunteers, a Coffee House Company, an Incorporated Trades Society, a Farmers' Society, a Horticultural Society, a Choral Union, a Boating Club, a Literary Association, and a Free Church Young Men's Christian Association. Horse and cattle fairs are held on the first Tuesday of July and the last Tuesdays of August and October. The sheriff-substitute for the Lewis district is resident here, and ordinary and small debt courts are held every Tuesday during session. Pop. of town (1841) 1354, (1861) 2587, (1871) 2525, (1881) 2627, of whom 1152 were males and 1475 females. Houses (1881) 369.

Storr. See SNIZORT.

Stotfield. See LOSSIEMOUTH.

Stour. See PAPA STOUR.

Stow (Old Eng. 'place'), a village of SE Edinburghshire, and a parish partly also of Selkirkshire. On all sides sheltered by hills, the village lies, 580 feet above sea-level, near the left bank of Gala Water, and ¼ mile E of Stow station, across the stream, this being 6¾ miles NNW of Galashiels and 26¾ (by road 24) SSE of Edinburgh. A pretty little place, of high antiquity, it has a post office, with money order, savings' bank, and telegraph departments, 6 insurance agencies, an hotel, gasworks, 3 woollen mills, and a hiring fair on the second Tuesday of March. Its town-hall, built about 1854, is a handsome edifice, with a reading-room and library. The new parish church, on a sloping bank, a little way S of the village, was erected in 1873-76 at a cost of £8000, and is one of the finest parish churches in the South of Scotland. Designed by Messrs Wardrope and Reid in the Early Decorated Gothic style, it consists of apsidal nave, transept, N side aisle, and NW clock-tower and spire, over 140 feet high, and has 700 sittings, warming apparatus, stained-glass windows, etc. A Free church, ½ mile NNW of the village, dates from Disruption times; and a new U.P. church, built in 1871-72 at a cost of £1800, is a neat structure, with a spire and 500 sittings. Pop. (1841) 408, (1861) 397, (1871) 435, (1881) 440.

The parish, containing also FOUNTAINHALL, BOWLAND, and CLOVENFORDS stations, is bounded N by Fala and Soutra, NE by Channelkirk, E by Channelkirk, Lauder, and Melrose, SE by Galashiels, S by Selkirk and Yarrow, SW and W by Innerleithen, and NW by Heriot, so that, while itself lying in two counties, it is in contact with three others—Haddington, Roxburgh, and Peebles shires. Its utmost length, from N by W to S by E, is 12¾ miles; its breadth varies between ⅜ mile and 9½ miles; and its area is 57⅜ square miles or 36,891½ acres, of which 10,017¼ belong to Selkirkshire, and 463¾ to the Nettlingflat detached portion (8 × 6¾ furl.), ⅜ mile N of Heriot station. The TWEED flows 2 miles east-south-eastward along all the southern border to the mouth of CADDON Water, which, rising close to the western border at an altitude of 1800 feet, runs 7¾ miles south-eastward, for the last ¾ mile along the Galashiels boundary. From a point 5 furlongs SSE of Heriot station, GALA WATER winds 16½ miles south-south-eastward—for the first 7½ furlongs along the boundary with Heriot, and for the last 2⅝ miles along that with Melrose—until it quits the parish near Torwoodlee. During this course its principal affluents, all noticed separately, are HERIOT, ARMIT, COCKUM, and LUGGATE Waters; and it is closely followed by 12¼ miles of the Waverley route of the North British railway, which crosses and recrosses it no fewer than seventeen times. It is subject to violent spates, one of which, in June 1835, here swept away part of a dwelling-house, and drowned two of the inmates. The Galashiels and Peebles branch of the railway runs, too, for 4½ miles along the south-eastern and southern verge of the parish. Beside the Tweed the surface declines to 390, beside Gala Water to 490, feet above sea-level. Chief elevations to the E of the latter stream, as one goes up the vale, are *Caitha or Cathie Hill (1125 feet), Torsonce Hill (1178), *Sell Moor (1388), Catpair Hill (1070), Kittyflat (1079), and a height near Middle Town (1250); to the W, Laidlawstiel Hill (1083), Crosslee or Mains Hill (1157), Knowes Hill (1222), Black Law (1473), *Stony Knowe (1647), Great Law (1666), Fernieherst Hill (1643), *WINDLESTRAW LAW (2161), *Eastside Heights (1944), and Rowliston Hill (1380), where asterisks mark those summits that culminate on the confines of the parish. The rocks are mainly Silurian; and the minerals include small quantities of calc-spar, quartz, and steatite. The soils range from loamy alluvium to barren moor; and barely one-third of the entire area is in tillage, rather more than 800 acres being under wood, and the rest chiefly hill-pasture. Ancient camps, varying in size from half an acre to two acres, some of them circular and others oval, occur in at least seven places. Old castles, of various size, generally square towers or parallelograms, were formerly numerous; and the ruins of a number of them still exist (see HOP-PRINGLE, LUGGATE WATER, TORWOODLEE, and WINDYDOORS). The church of Stow was formerly possessed by the bishops of St Andrews as a mensal church, and served by a vicar. The whole parish anciently bore the name of Wedale, 'the vale of woe;' and a residence of the bishops on the site of the village originated the name of Stow, and, under the name of the Stow of Wedale, was the place whence they dated many of their charters. The earliest church of Wedale, St Mary's, alleged to date from Arthurian days, stood on the Torsonce estate, near the 'Lady's Well,' and was famed for its possession of certain fragments of the True Cross. Till about 1815 a huge stone was pointed out here, bearing a so-called footprint of the Virgin Mary. The next church, only lately superseded, and still standing in the village, is itself a structure of great though varying antiquity, as attested by a round-headed Romanesque S doorway and a good Second Pointed W window. An extensive forest anciently existed in a district partly within Wedale and partly within Lauderdale, and was common to the inhabitants of Wedale on the W, the monks of Melrose on the S, and the Earls of Dunbar and the Morvilles on the E. Wedale early possessed the privilege of sanctuary in the same manner as Tyninghame; and 'the black priest of Wedale' was one of the three persons who enjoyed the privileged law of the clan Macduff. John Hardyng, when instructing the English king how to ruin Scotland, advises him

> 'To send an hoste of footmen in,
> At Lammesse next, through all Lauderdale,
> At Lammermore woods, and mossis over-rin,
> And eke therewith the Stow of Wedale.'

William Russell (1741-93), the historian of Modern Europe, was born at Windydoors; and John Lee, D.D. (1780-1859), the Principal of Edinburgh University, at Torwoodlee Mains. Mansions, noticed separately, are BOWLAND, BURNHOUSE, CROOKSTON, and TORWOODLEE. A fifth, Laidlawstiel, 1 mile NE of Thornilee station and 6 miles W by N of Galashiels, belongs to Lady Reay. Eleven proprietors hold each an annual value of £500 and upwards, 8 of between £100 and £500.

Giving off since 1870 part of CADDONFOOT *quoad sacra* parish, Stow is in the presbytery of Earlston and the synod of Merse and Teviotdale; the living is worth £454. Three public schools—Caitha, Fountainhall, and Stow—with respective accommodation for 50, 133, and 226 children, had (1884) an average attendance of 46, 67, and 165, and grants of £56, 8s., £64, 13s., and £152, 16s. 6d. Valuation of Edinburghshire portion (1871) £22,826, (1881) £26,387, (1885) £24,856; of Selkirkshire portion (1865) £4337, (1885) £6851. Pop. (1801) 1876, (1831) 1771, (1861) 2171, (1871) 2306, (1881) 2395, of whom 441 were in Selkirkshire, 2010 in Stow ecclesiastical parish, and 385 in Caddonfoot.—*Ord. Sur.*, shs. 25, 24, 1865-64.

Straan. See STRACHAN.

Stracathro (old forms, Strukatherach and Stracathirach; Celt. *Strath-cath-rath*, 'the fort of the battlefield or strath;' or *Strath-cathroc*, 'the strath of the Cathroc,' this being a conjectured old name for the Cruick), a parish in the NE of Forfarshire, with the centre about 3 miles N of BRECHIN. It is bounded N by the parish of Edzell and by Kincardineshire, E by the parish of Logie-Pert, SE by the parish of Dun, S by the parish of Brechin, SW by the parish of Menmuir, and W by the parish of Lethnot. The boundary is largely natural, being formed on the W and the greater part of the N side by the WEST WATER for 7¼ miles upward from its junction with the NORTH ESK. From the mouth of the West Water the line strikes up the North Esk for ¼ mile, and then crosses the haugh by Capo to a point farther down a little below the NE corner of the policies of Stracathro House; follows the E side of the policies; zig-zags round Hill of Stracathro, back across the valley of Cruick Water, till, near Chapelton, it takes to the course of a small burn which it follows up to its source, and on between Hill of Lundie and the Brown Caterthun, back to the West Water. The greatest length of the parish, from this part of the West Water south-eastwards, is 6½ miles; the average breadth at right angles to this is a little over 1 mile; and the area is 5304·522 acres, of which 65·954 are water. Nearly 4000 acres are under cultivation, and about 600 are woodland, the rest being pastoral or waste. The central portion along the Cruick is part of the great valley of Strathmore, and from this the surface rises north-westward to the Hill of Lundie (800 feet), and south-eastward to the Hill of Stracathro (400). The former is still bleak and bare, though portions of it have been reclaimed by the present proprietor, Mr John Shepherd; the latter commands a fine view. The soil is, in the NW, partly workable clay or loam, but a good deal of it is moorish; in the centre a sharp black loam with a gravelly subsoil; and in the SE a deep clay. The underlying rocks are conglomerates, red sandstones, and beds of limestone belonging to the Old Red Sandstone system. The drainage is effected by the streams already mentioned and the burns that flow to them, the chief being Inchbare Burn. The bridges across the Cruick at Newtonmill and the Manse were built about 1781, that across the West Water at Inchbare in 1787. Three long graves at the E end of the church used to be pointed out as those of three Danish kings who fell in battle here during an incursion. A ford on the North Esk, about ¼ mile above the mouth of the West Water, is called the King's Ford, but it was probably merely the point where the ancient 'King's Highway' crossed the river. Three events of historic importance have taken place within the parish. The first was the battle of Stracathro, where, in 1130, the army of David I. defeated the followers of Angus, Mormaer of MORAY. It seems to have been fought on the lands of Newton and Auchenreoch, SW of Inchbare, where many relics of such an event have turned up from time to time; and some authorities hold that from it is derived the name of the parish—*Strathcatherach*, 'the strath of the battle of the king.' The second event was in 1296, when, at Stracathro church, John Baliol did homage to Edward I., and was deprived of his royal position; and the third was in 1452, when at Huntly Hill, on the Hill of Stracathro, 'Earl Beardie,' or the 'Tiger Earl of Crawford,' one of the 'Banded Earls,' was, with his 'kine and friendis,' defeated by the loyal clans of the NE of Scotland, under the command of the Earl of Huntly. The incident is generally known as the Battle of Brechin, and Earl Beardie was so enraged at his defeat, which was caused by the treachery of one of his own followers, that he declared if he had only gained the victory he 'wad have been content to hang seven years in hell by the breers of the e'en.' A large boulder on the top of Huntly Hill is said to mark the spot where Huntly's standard was planted. There are hamlets at INCHBARE and Newtonmill, and the mansions are Auchenreoch House and Stracathro House. The latter is a good Grecian building erected about 1840 by the then owner of the estate, Mr Alexander Cruickshank, whose trustees sold the property in 1848 to Sir James Campbell (Lord Provost of Glasgow, 1840-43). His son, Jas. Alex. Campbell, Esq., M.P. (b. 1825; suc. 1876), holds 3846 acres in the shire, valued at £5901 per annum. The E end of the parish is traversed by the main road through the Valley of Strathmore from Brechin to Stonehaven, and there are a number of good district roads, but the nearest railway stations are at CRAIGO and BRECHIN.

The parish, which comprehends the ancient parishes of Stracathro and Dunlappie (the latter being the north-western part), united in 1618, is in the presbytery of Brechin and the synod of Angus and Mearns, and the living is worth £220 a year. Before the Reformation Stracathro was the vicarage of the Chanter of Brechin. A well (now dry) near the church was known as Brawl's or Sbrule's Well, so that the old church was probably dedicated to St Rule. The present parish church, a plain building erected in 1791, and repaired in 1849, has 360 sittings. Under the school board, Stracathro school, with accommodation for 146 pupils, had, in 1883, an attendance of 66, and a grant of £59, 18s. The principal proprietor is Dr J. A. Campbell, M.P., of Stracathro, and 1 other holds an annual value of more than £500, 7 hold each between £500 and £100, and 2 hold each between £100 and £50. Valuation (1865) £5344, 8s. 10d., (1885) £6569, 2s. Pop. (1801) 593, (1831) 564, (1861) 546, (1871) 503, (1881) 487, of whom 264 were males and 223 females. Houses (1881) 111.—*Ord. Sur.*, sh. 57, 1868.

Strachan, a hamlet and a parish of NW Kincardineshire. The hamlet stands, 260 feet above sea-level, on the left bank of the Water of Feugh, 3½ miles SSW of Banchory and 21½ WSW of Aberdeen, under which it has a post office.

The parish, much the largest in the county, is bounded N and NE by Banchory-Ternan, E by Durris, SE by Glenbervie, Fordoun, and Fettercairn, SW by Edzell and Lochlee in Forfarshire, and NW by Birse in Aberdeenshire. Its utmost length, from NNE to SSW, is 13 miles; its utmost breadth is 7¾ miles; and its area is 65⅞ square miles or 41,885⅝ acres, of which 213¼ are water. Issuing from tiny Loch Tennet (1650 feet above sea-level), on the NW slope of Mount Battock, the Water of AAN, A'en, or Avon runs 8½ miles north-eastward along the Aberdeenshire border, till it falls into the Water of FEUGH, which winds 6 miles east-north-eastward—for 3 and 4¾ furlongs along the Birse and Banchory boundaries, but elsewhere across the interior—and which passes off into Banchory at a point 7½ furlongs above its influx to the river Dee. The Water of DYE, rising at an altitude of 2000 feet on the SE slope of Mount Battock, winds 14⅝ miles eastward and north-by-eastward to the Feugh; and the DEE curves 3⅛ miles eastward along all the northern boundary. The surface declines beside the Dee to 195 feet above sea-level, and rises thence to 1104 feet at the Hill of Goauch, 1747 at Kerloch, 1944 at CLACHNABEN or Klochnaben, 1488 at CAIRNIEMOUNT, and 2555 at Mount BATTOCK, near the meeting-point of Kincardine, Forfar, and Aberdeen shires. 'The main portion of Strachan consists of high hills and moors,' writes Mr James Macdonald in *Trans. Highl. and Ag. Soc.* (1881). 'The arable area is

very small, and is made up largely by a narrow irregular fringe along both sides of the Feugh and its affluent, the Water of Dye. Near Strachan hamlet on the Feugh, there is a considerable stretch of really good arable land, mostly black free fertile loam. The principal estates in this parish are those of Glendye, Strachan, and Blackhall. On the former, now owned by Sir Thomas Gladstone, Bart., of FASQUE, there is a small strip of arable land along the course of the Dye, mostly between Binglyburn and Glendye Lodge, a short distance above the bridge of Dye. On the Strachan estate there are a few good arable farms, the largest, Bowbutts, extending to 180 acres. The soil is light black loam, on gravel or rock. . . . Very little wheat is grown in this district, but oats and barley of heavy weights and very fine quality are raised. Harvesting begins, as a rule, early in September. A good many cattle, mostly crosses between the polled and shorthorn breeds, are reared in the parish. Most of the land has been drained since 1850 by Government, the proprietors, or the tenants; while, besides great improvement in the way of building and fencing, a large extent of new land has been reclaimed, chiefly from moor and moss. Rent varies from 20s. to 28s. per acre. On the Blackhall estate there are also some very good arable farms, managed in a manner similar to the system prevailing on the Strachan property. One of the largest and best managed holdings is the combined farms of Letterbeg and Bucharn. The extent is 245 acres arable and 60 of natural pasture, the rental being £240, 11s. The soil is mostly black friable loam. A portion of the farm is put under sheep, and is broken up occasionally. The other portion is worked in five shifts.' The predominant rock is granite. Barely one-twenty-fifth of the entire area is in tillage; nearly as much is under wood, plantations mostly of larch and Scotch firs in the northern district; and all the remainder is either pastoral or waste. On 21 Sept. 1861, the Queen, after leaving FETTERCAIRN, 'came to a very long hill, called the Cairniemount, whence there is a very fine view; but which was entirely obscured by a heavy driving mist. We walked up part of it, and then for a little while Alice and I sat alone in the carriage. We next came to the Spittal Bridge, a curious high bridge, with the Dye Water to the left, and the Spittal Burn to the right. Sir T. Gladstone's shooting-place is close to the Bridge of Dye—where we changed carriages again, re-entering the double dogcart —Albert and I inside, and Louise sitting behind. We went up a hill again and saw Mount Battock. You then come to an open country, with an extensive view towards Aberdeen, and to a very deep, rough ford, where you pass the Feugh at a place called White Stones. It is very pretty, and a fine glen with wood.' Dr Thomas Reid (1710-96), the distinguished moral philosopher, was the son of a minister of Strachan; and the great Covenanter, Andrew Cant (*circa* 1590-1664), was one of the Cants of Glendye. The modern name, Strachan, is simply a corruption of Stratha'en ('Valley of the A'en'), and is popularly pronounced Straan. This parish is in the presbytery of Kincardine O'Neil and the synod of Aberdeen; the living is worth £202. The parish church, at the hamlet, was built in 1867, and contains 340 sittings. There is also a Free church; and two public schools, Glendye and Strachan, with respective accommodation for 55 and 120 children, had (1884) an average attendance of 16 and 64, and grants of £27 and £62, 8s. Valuation (1856) £3637, (1885) £5782. Pop. (1801) 730, (1831) 1039, (1861) 870, (1871) 795, (1881) 694.—*Ord. Sur.*, sh. 66, 1871.

Strachur and Stralachlan, a parish on the W side of Cowal district, Argyllshire, containing Strachur village, 1 mile SE of Creggans steamboat pier on Loch Fyne, 5 miles S by E of Inveraray, 4½ NNW of Lochecheadhead, and 19 NNW of Dunoon. The village has a post office, with money order, savings' bank, and telegraph departments, a good hotel, and cattle fairs on the last Saturday of May and the first Tuesday of October. The present parish comprises the ancient parishes of Kilmaglass or Strachur to the NE and Kilmorrie or Stralachlan to the SW, which were disjoined from Dunoon, Lochgoilhead, and Inverchaolain in 1650. It is bounded NE and E by Lochgoilhead, S by Kilmun, Kilmodan, and Kilfinan, and NW by Loch Fyne. Its utmost length, from NE to SW, is 17¼ miles; its breadth varies between 1⅝ and 7 miles; and its area is 62⅜ square miles or 39,083$\frac{5}{10}$ acres, of which 24,542½ belong to Strachur and 14,541 to Stralachlan, whilst 366⅜ are foreshore and 440 water. The coast, extending 18¾ miles south-westward along the eastern shore of Loch FYNE, from the neighbourhood of St CATHERINES Ferry to Largiemore, rises rapidly from the water's edge, which, except for 3 miles near Stralachlan church, is closely skirted by the road to Otter Ferry. It is slightly indented by Strachur, Newton, and Lachlan Bays, and between the two last projects its sole conspicuous headland, Barr nan Damh, 527 feet high. The river CUR, formed by two headstreams at an altitude of 380 feet, runs 6¾ miles southwestward and south-eastward to the head of fresh-water Loch ECK (6⅛ miles × 3 furl.; 67 feet), whose upper 2⅛ miles belong to Strachur. The surface of Strachur is hilly everywhere, in places mountainous, chief elevations from N to S being Creag Dubh (1559 feet), Creagan an Eich (1068), Meall Reamhar (1364), *BEN LOCHAIN (2306), Carnach Mor (2048), *BEN BHEULA (2557), Ben Dubhain (2090), *Sgor Coinnich (2148), and Ben Bheag (2029), where asterisks mark those summits that culminate on the eastern border. In Stralachlan the highest point is Cruach nan Capull (1576 feet). Metamorphic rocks, chiefly mica slate and clay slate, predominate; limestone has been worked; and there are indications of coal and ironstone. The low grounds are disposed in two vales which bear the distinctive names of Strachur Strath and Strath-Lachlan. The former and larger, at the head of Lock Eck, consists of good alluvial soil, particularly along the banks of the Cur. 'Any kind of crop might be raised in such soil. There is good meadow ground for hay, but the river often overflows its banks in summer and autumn, doing much harm to the crops of hay and corn. Like many other rivers fed by mountain streams, it is very difficult to provide any remedy against the overflowing of its banks or the occasional changing of its course.' The hills afford excellent pasture for sheep and black cattle, and, though once heathy, are now to a great extent covered with rich soft verdure. Barely one-thirtieth of the entire area is in tillage; nearly one-twentieth is under wood; and all the remainder is pastoral or waste. Strachur Park, between Strachur village and Creggans, is the property of John Campbell, Esq. (b. 1847; suc. 1874), who holds 24,593 acres in the shire, valued at £3287 per annum. Another mansion, noticed separately, is CASTLE-LACHLAN. This parish is in the presbytery of Dunoon and the synod of Argyll; the living is worth £205. Strachur church, at the village, was built in 1789, and contains 400 sittings; and Stralachlan church, 6 miles to the SW, was built in 1792, and contains 150 sittings. There is a Free church of Strachur; and three public schools — Poll, Strachur, and Stralachlan — with respective accommodation for 72, 80, and 76 children, had (1884) an average attendance of 23, 71, and 47, and grants of £36, 16s., £37, 14s., and £56, 2s. Valuation (1860) £4707, (1885) £7628. Pop. (1801) 1079, (1831) 1204, (1841) 1086, (1861) 872, (1871) 867, (1881) 932, of whom 623 were Gaelic-speaking, and 358 were in Stralachlan, 574 in Strachur.—*Ord. Sur.*, shs. 37, 29, 1876-73.

Strae. See GLENSTRAE and GLENORCHY.

Strageath Camp. See MUTHILL.

Straiton, a village and a large parish of Carrick, S Ayrshire. The village, towards the NW of the parish, stands, 380 feet above sea-level, near the right bank of the Water of Girvan, 6⅞ miles W by S of Dalmellington and 7 ESE of Maybole, under which it has a post office.

The parish, containing also most of PATNA village, is bounded NE by Dalrymple and Dalmellington, SE and S by Carsphairn and Minnigaff in Kirkcudbrightshire, SW by Barr, W by Dailly and Kirkmichael, and

NW by Kirkmichael. Its utmost length, from N by W to S by E, is 17⅜ miles; its breadth varies between 1⅜ and 9 miles; and its area is 81⅝ square miles or 52,249⅜ acres, of which 2448½ are water. Desolate Loch Enoch (6½ × 4½ furl.; 1650 feet), at the southern extremity of the parish, sends off Eglin and Gala Lanes 6⅜ miles north-north-eastward to the head of Loch Doon (5⅝ miles × 6½ furl.; 680 feet), whose western shore belongs wholly to Straiton, whilst the eastern is divided between Carsphairn and Dalmellington, and, issuing from whose foot, the river Doon winds 12 miles north-westward along all the north-eastern border, till, a little below Carnochan, it passes off from Straiton. (See Ness Glen.) From a point 7 furlongs below its source in Barr parish, the Water of Girvan winds 7¼ miles north-by-eastward, 8⅞ miles north-westward, and 6½ furlongs northward along the Kirkmichael boundary to within 2½ furlongs of Cloncaird Castle. It thus has a total course here of nearly 17 miles, though the point where it first touches and that where it quits the parish are only 10 miles distant as the crow flies; and early in this course it travers four lakes, of which Loch Bradan (1 × ¼ mile; 900 feet) is much the largest. The Stinchar, early in its course, runs 3½ miles north-north-westward and west-south-westward along or close to the Barr boundary, on which lies also Linfern Loch (4½ × 3 furl.; 980 feet). Of eight other lakes and lakelets the chief are Lochs Macaterick (1¼ mile × 4¾ furl.; 990 feet), Ricawr (6 × 5 furl.; 960 feet), Derclach (4½ × 1¼ furl.; 870 feet), and Finlas (1½ mile × 2¾ furl.; 840 feet), sending off their superfluence to Loch Doon; and triangular Loch Spallander (3 × 2 furl.; 695 feet), on the Kirkmichael boundary. Sinking along the Doon to 295, and along the Girvan to 300, feet above sea-level, the surface thence rises to 1005 feet at Keirs Hill, 1163 at Turgeny, 1160 at Craigengower, 929 at Benan Hill, 1252 at the Big Hill of Glenmount, 1716 at Craiglee, and 2270 at Mullwharchar. The valleys of the Girvan and the Doon, and the gentler acclivities of their hill-screens, are under the plough, and tufted with wood; and they offer to the eye some fine landscapes. The rest of the parish is all upland and pastoral; and the greater part of it, from the southern and eastern boundaries inward, is a wilderness of heights, not mountainous, but wild and solitary, with nothing save rocks and heather. The extent of uncultivated land is about eleven times that which owns the dominion of the plough. The rocks exhibit great diversity, and afford wide scope for the study of the geologist. Granite prevails above Loch Doon; greywacke and greywacke slate adjoin the granite; along the Girvan are trap rocks, interspersed with mountain limestone; and rocks of the Carboniferous formation, comprising workable coal, ironstone, and limestone, occur around Patna. The soil of the arable lands is clayey and retentive on the Doon, light and gravelly on the Girvan, and very diversified in other places. The chief antiquities, excepting only some cairns, have been noticed in our article on Loch Doon. Mansions, noticed separately, are Blairquhan Castle and Berbeth House; and the chief proprietors are the Marquis of Ailsa, Sir E. Hunter-Blair, Bart., and A. F. M'Adam, Esq. Giving off a portion to Patna *quoad sacra* parish, Straiton is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £393. The parish church, St Cuthbert's, is a plain old building, with an earlier Gothic aisle, and, as altered and repaired in 1787 and 1813, contains 414 sittings. Two public schools, Patna and Straiton, with respective accommodation for 180 and 98 children, had (1884) an average attendance of 108 and 62, and grants of £98 and £53, 10s. Valuation (1860) £10,347, (1885) £14,988, 13s. 3d. Pop. (1801) 1026, (1831) 1377, (1861) 1544, (1871) 1443, (1881) 1241, of whom 701 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 14, 8, 1863.

Stralachlan. See Strachur.

Stranathrow, a fishing-village, with a harbour and a coastguard station, in Fetteresso parish, Kincardineshire, 5 miles NNE of Stonehaven. In gneiss rocks to the S are two magnificent natural arches, 80 feet high and 50 wide, which are washed by the sea at high tide.

Stranraer, a town and a parish at the head of Loch Ryan in Wigtownshire. A royal, parliamentary, and police burgh, a seat of trade, a seaport, and the capital of the W of Wigtownshire, the town stands on the Portpatrick railway (1861), 7¾ miles NE of Portpatrick, 58¾ SSW of Ayr, 72¾ WSW of Dumfries, and 162½ (by road 128) SW of Edinburgh. It includes a portion called Tradeston in Inch parish, and portions called Sheuchan and Hillhead in Leswalt parish; is bisected nearly through the middle by a streamlet, which has now been arched over at all points where it comes in view of the public streets; occupies broken ground, with such inequalities of surface as are unfavourable for scenic effect, and even disadvantageous for facile traffic; and, though consisting chiefly of modern streets and possessing a large amount of handsome or elegant architecture, presents very little regularity or tastefulness of arrangement. One street, about 3 furlongs in length, runs with a curvature along the margin of Loch Ryan; another, of about equal length, but commencing further to the E, goes bendingly in somewhat the same direction; a third, about 3½ furlongs in length, beginning at a point opposite the E end of the first and nearly the middle end of the second, goes also in somewhat the same direction; seven others, each from 100 to 200 yards in length, cross these in various directions; and some clustered rows of houses stand in the outskirts. Entire streets, formed towards the end of last century, contained originally, and much more contain now, many houses equal to the best in some of the richer and more populous towns in the kingdom; but they were allowed to take any line or curve or bend which caprice or accident might dictate, so that they exhibit scarcely any symmetry or grace in the grouping of their edifices. The plain old Town-Hall, erected in 1855, is now used as a volunteer drill-hall and armoury. The new Town-Hall and Court House was erected in 1872-73, after designs by Mr Wardrop of Edinburgh, at a cost of £7000. It is a fine Scottish Baronial edifice, two stories high, with a tower and spire, a court room, a police office, etc. The prison was closed in 1882, along with many other local prisons in Scotland, and the building is now used as a private dwelling. All prisoners sentenced at the court here to more than 14 days' imprisonment are now sent to the central prison at Maxwelltown, Dumfries—those to less than 14 days to the local prison at Wigtown. Stranraer or Kennedy's Castle, almost hidden by other buildings, in the centre of the town, is a baronial fortalice founded towards the close of the 15th century. Consisting of whinstone, with corners and lintels of sandstone, it has thick walls and small windows, crow-stepped gables and pepper-box turrets, and in 1682 became the residence of the 'Bloody Claverse,' as sheriff of Galloway. Stranraer parish church is a plain, substantial building of 1841, and contains 1084 sittings. Sheuchan Established church, a handsome edifice, with a conspicuous square bell-tower, was built as a chapel of ease in 1842, and became parochial in 1868. Stranraer Free church is a plain building of the Disruption period, containing 728 sittings; but for the Sheuchan Free church congregation, a fine new church was opened in August 1884. It is situated in King Street, contains 550 sittings, and cost over £2000. Ivy Place U.P. church, built in 1840, contains 750 sittings; and a handsome new church, erected by the West U.P. congregation, was opened in October 1884. It is situated in Lewis Street, close to the Court House, contains 500 sittings, and cost about £3000. The Reformed Presbyterian church was built in 1824, and contains 710 sittings. The United Original Secession church was built in 1843; and St Joseph's Roman Catholic church (400 sittings) in 1853. The Stranraer Academy, built in 1845 at a cost of £2000, passed, in terms of the Education Act of 1872, to the burgh school board; and is conducted by three masters, two mistresses, and four assistant teachers. The burgh school board had in 1884 three schools under their charge—the Academy, with 445 on the roll; the

Sheuchan school, with 250; and the elementary school, with 450. The total expenditure of the board was £1911, 2s. 3d., being at the rate of £2, 5s. 10½d. per scholar in average attendance. The board have ten certificated teachers under them, seven ex-pupil teachers, and seven pupil teachers. Stranraer Reformatory (1859) is licensed to contain 100 boys; and the Wigtownshire Combination Poorhouse has accommodation for 352 inmates. Other institutions are a public reading-room, a public library, an athenæum, an agricultural society, and some philanthropic, religious, and miscellaneous associations.

The town has a post office, with money order, savings' bank, and telegraph departments; a railway station, and a branch railway to the harbour; offices of the British Linen Company, the Clydesdale, the Commercial, the National, and the Union Banks; offices or agencies of 26 insurance companies; gas-works (1840); and 4 principal hotels, called the King's Arms, the Commercial, the George, and the Albion. A Liberal newspaper, the *Galloway Advertiser and Wigtownshire Free Press* (1843), is published every Thursday. A weekly market is held on Friday; cattle fairs are held on the third Friday of April, May, June, July, August, September, October, and November; horse fairs are held on the Monday before the first Wednesday of January, the Thursday in June before Kelton Hill, and the Monday before the second Thursday of October; and a hiring fair is held on the first Friday of May. Manufactures, on any considerable scale, are prevented by the want of water-power, and the high price of fuel. The employments of the inhabitants are mainly such as are common to towns situated in the centre of agricultural districts. There is an engineering and locomotive works in connection with the Portpatrick railway, employing between 30 and 40 men. The handloom weaving and nail-making trades formerly carried on are now defunct. Some fishing, chiefly for white fish and oysters, is carried on in Loch Ryan; and, during the winter herring fishing on Ballantrae Banks, a large number of boats make Stranraer their headquarters, owing to the excellent harbour accommodation and railway facilities. A large general trade, for the W of Wigtownshire, is conducted in the exchange of country produce for imported goods. The healthiness of the town and its capacity of uniting the facilities of a market with many of the advantages of a country life, have rendered it the adopted home of a considerable number of respectable annuitants. The commerce was so small in 1764 that only two vessels, of 30 or 35 tons each, belonged to the port; and it since has alternately increased and dwindled, the aggregate tonnage belonging to the port being 1732 in 1801, 2684 in 1818, 1481 in 1855, 2969 in 1868, and 1373 in 1884. The port had formerly a custom-house jurisdiction, from Sandhouse in Carleton Bay to the Mull of Galloway, and thence to the S side of Gillespie Burn, but it has now been merged in Ayr. Owing to the increase in the railway facilities due to the opening of the Girvan and Portpatrick railway in 1877, the shipping trade of the port has declined rather than advanced since that time. The harbour has a long wooden pier of modern erection, but is only tidal, and has not much depth of water; vessels of from 60 to 100 tons come close to the town; vessels of somewhat greater burden find good anchorage in the vicinity of the pier; and vessels of 300 tons anchor at what is called the Road, about ¼ mile distant. On the opposite side of the harbour there is the Railway or East Pier, from which the steamers ply daily to and from Larne in Ireland by what is known as the 'short sea route' (39 miles). It has water at all states of the tide for vessels of moderate draught. A steamer also sails weekly to Glasgow, and another fortnightly to Port William, Isle of Whithorn, Drumore, and Liverpool. The principal import is coal; and the exports include shoes, leather, cheese, grain, and miscellaneous farm produce. Sir James Caird, K.C.B., F.R.S., of Cassencarrie, the agricultural reformer, was born at Stranraer in 1816; and North West Castle was the residence of the famous Arctic explorer, Sir John Ross, K.C.B. (1777-1856), whose father was minister of Inch.

The town, which rose up around the castle and a pre-Reformation chapel, was created a burgh of barony in 1596, and a royal burgh in 1617. It has adopted the General Police and Improvement Act of 1862, and is governed by a provost, 2 bailies, a dean of guild, a treasurer, and 13 councillors, who also act as police commissioners. With Wigtown, Whithorn, and New Galloway it unites in sending a member to parliament; but the Redistribution Bill of 1885 proposes to merge the burgh in the county. The sheriff court for the western division of the county is held on every Wednesday during session; a sheriff small debt court is held on every alternate Wednesday during session; and a justice of peace small debt court is held on the first Monday of every month. Corporation revenue (1833) £225, (1865) £272, (1884) £338. Parliamentary constituency (1885) 788; municipal, 1004. Valuation (1875) £14,733, (1885) £22,151. Pop. (1841) 4889, (1861) 6273, (1871) 5977, (1881) 6415, of whom 3402 were females, 6342 were in the parliamentary and police burgh, 3455 were in the royal burgh and parish of Stranraer, 3528 in Stranraer ecclesiastical parish, 1506 in Inch parish, 1381 in Leswalt parish, and 73 on board ship.

Seal of Stranraer.

The parish of Stranraer, coextensive with the royal burgh, was formed out of Inch in 1628. It is bounded by Loch Ryan, Inch, and Leswalt; and comprises 55½ acres of land, and 35¾ acres of foreshore. Part is held in burgage; part belongs to the Earl of Stair, and is let in leases of 99 and 999 years; and part is subfeued by Agnew of Sheuchan. The Rev. John Livingstone, (1603-72), a Covenanting divine, was minister from 1638 to 1648. Stranraer is the seat of a presbytery in the synod of Galloway; the living is worth £286; whilst that of Sheuchan, with 533 inhabitants, is £237.

The presbytery of Stranraer comprehends the *quoad civilia* parishes of Ballantrae, Colmonell, Inch, Kirkcolm, Kirkmaiden, Leswalt, New Luce, Old Luce, Portpatrick, Stoneykirk, and Stranraer, and the *quoad sacra* parishes of Arnsheen, Glenapp, Lochryan, and Sheuchan.—The Free Church also has a presbytery of Stranraer, with churches at Cairnryan, Glenluce, Inch, Kirkcolm, Kirkmaiden, Leswalt, Portpatrick, Sheuchan, Stoneykirk, and Stranraer, and a preaching-station at New Luce.—*Ord. Sur.*, sh. 3, 1856.

Strath, a parish in the Isle of Skye, Inverness-shire, containing the villages of Broadford and Kyle-Akin, and including the islands of Scalpay, Pabba, and Longa. It is bounded E and SE by Sleat, W by Bracadale, NW by Portree, and on all other sides by the sea. Its utmost length, from E by N to W by S, is 19⅞ miles; its breadth varies between 3½ and 10¼ miles; and its area is 116⅝ square miles or 74,751 acres, of which 2644½ are foreshore, 678 water, and 17⅛ tidal water. The northern coast is indented by Loch Ainort at the Portree boundary, Broadford Bay, and Loch na Beiste; the southern by Loch Eishort at the Sleat boundary, Loch Slapin, and Loch Scavaig at the Bracadale boundary. Of eighteen fresh-water lakes the largest and most interesting is Loch Coruisk, which, lying on the Bracadale border, is 114½ acres in extent; whilst of several streams the largest is the Sligachan. The surface is everywhere hilly or grandly mountainous, the chief elevations being Beinn na Caillich (2396 feet), Sgiur na Coinnich (2401), and Beinn na Seamraig (1839) on the Sleat boundary; a second Beinn na Caillich (2403) and Beinn Dearg (2323), to the W of Broadford; and Marsco (2414), Blabhein or Blaven (3042), and

Ben Meabost (1126), still further to the W. According to the Ordnance Survey, 62,040 acres are moorland, leaving less than one-seventh of the entire land area for arable grounds and woodlands. Where limestone abounds the pasture is rich and luxuriant; but where the primitive rocks occur, they are of a kind to yield little soil, and maintain a scanty and inferior herbage. The soil of the arable grounds is partly clay, partly black loam, and partly reclaimed moss. Sandstone, chiefly of a light-blue colour, has been quarried for building, and limestone worked both as a manure and as a coarse yet ornamental marble. Remains of pre-Reformation chapels exist at Ashig, Kilbride, and Kilmorie; and ruins of seven circular towers, each in sight of the next, and all surmounting rocks, stand in the W. From the southernmost commences a series in Sleat, and from these again a series on the opposite shore of Arisaig. A number of tumuli in the E are traditionally said to mark the scene of a conflict with the Danes. A cave in the N is an object of interest to the curious as having, during several nights, in 1746, afforded shelter to Prince Charles Edward. A rocking-stone, consisting of a prodigious block of granite, and movable by a single finger, stands on the glebe. The landowners are Lord Macdonald and Alex. Macalister, Esq. of Strathaird. Strath is in the presbytery of Skye and the synod of Glenelg; the living is worth £370. The parish church was built at Broadford in 1841, and contains 900 sittings. There are also a Free church and a Baptist chapel at Broadford, and a chapel of ease at Kyle-Akin. Seven new public schools, with total accommodation for 439 children, had (1884) an average attendance of 251, and grants amounting to £243, 9s. 3d. Valuation (1860) £3684, (1884) £5538. Pop. (1801) 1748, (1841) 3150, (1861) 2664, (1871) 2562, (1881) 2616, of whom 2523 were Gaelic-speaking.

Strathaan. See STRACHAN.

Strathalladale. See HALLADALE and REAY.

Strathallan Castle, the seat of Viscount Strathallan, in Blackford parish, Perthshire, near the right bank of Machany Water, 3 miles NNW of Auchterarder. Standing rather high, amid a perfect sea of noble woods, it is a fine and substantial edifice, in which the Baronial style predominates. The exterior is comparatively modern, but the centre is of some antiquity. James, second son of the second Lord Drummond, in 1609 was raised to the peerage as Baron Maderty; and William, the fourth Lord Maderty, in 1686 was further ennobled as Viscount Strathallan. William, fourth Viscount, a zealous Jacobite, fell at Culloden (1746); and the forfeited titles were not restored till 1824 to his grandson, James Andrew Drummond, M.P., whose son, William Henry, seventh Viscount (b. 1810; suc. 1851), holds 7208 acres in the shire, valued at £7612 per annum.—*Ord. Sur.*, sh. 47, 1869. See chap. xxvi. of T. Hunter's *Woods and Estates of Perthshire* (1883).

Strathaven, a town in Avondale parish, Lanarkshire, 7½ miles S by W of Hamilton, 16 SSE of Glasgow, and 8¾ (by rail) S by E of High Blantyre station, as terminus of a branch line of the Caledonian. It stands, 600 feet above sea-level, on both banks of Powmillon Burn, 1 mile above its influx to Avon Water, and is a place of some antiquity. Seemingly it grew up under the protection of a strong castle built by an illegitimate grandson of the second Duke of Albany, Andrew Stewart, who in 1456 obtained the barony of AVONDALE, and next year was created Lord Avondale. The ruins of the castle still crown a rocky eminence by the side of Powmillon Burn, and form a fine feature in the landscape. In the days of its strength it was probably quite engirt by the stream, and approached by a drawbridge. During Cromwell's usurpation it was temporarily inhabited by the Duchess of Hamilton, commonly called the good Duchess; but after her death in 1717 it seems to have fallen rapidly into decay. The town, which lost forty houses, a brewery, and large tanworks, by the great fire of 1 Nov. 1844, in its older parts wears an antique appearance, the houses being much huddled together, and the streets narrow and irregular; but the more modern parts contain some excellent houses, and comprise fine wide streets. A number of neat small villas also stand in the neighbourhood. Strathaven has a post office, with money order, savings' bank, and telegraph departments, branches of the Bank of Scotland, the Royal, and the Union Bank, 13 insurance agencies, gasworks, a weekly Thursday market, and fairs on the first Thursday in Jan., March, April, and Nov., the last Thursday in June, and the Thursday after Lanark October Tryst. Weaving is the staple industry. Avondale parish church, built in 1772, contains 800 sittings. It was thoroughly renovated in 1879, and was adorned with an heraldic stained-glass window by the Duke of Hamilton, and with three beautiful 'in memoriam' windows by leading parishioners. East Strathaven chapel of ease was erected in 1837, and there is a Free church, dating from Disruption times, but replaced in 1884 by a neat new edifice seating 480. There are also three U.P. churches—First (1777; 603 sittings), East (1820; renovated 1877; 800), and West (1835; 976); and St Patrick's Roman Catholic church (1863; 150). Crosshill public, Ballgreen public, and a Roman Catholic school, with respective accommodation for 405, 333, and 90 children, had (1884) an average attendance of 298, 244, and 37, and grants of £298, £228, 6s., and £28, 13s. The town was erected into a burgh of barony in 1450, but enjoys little or no special local government. Pop. (1781) 1444, (1841) 3852, (1851) 4274, (1861) 4085, (1871) 3645, (1881) 3812, of whom 2027 were females. Houses (1881) 562 inhabited, 21 vacant, 5 building.—*Ord. Sur.*, sh. 23, 1865.

Strathbagasty. See MUDALE.

Strathblane, a village and a parish of SW Stirlingshire. The village, standing on the river Blane, 265 feet above sea-level, by road is 4¼ miles N by E of Milngavie and 11¼ N by W of Glasgow, under which it has a post office; whilst its station on the Blane Valley section of the North British is 13 miles S of Bucklyvie, 4¼ W by N of Lennoxtown, and 15¾ N by W of Glasgow.

The parish, containing also the larger village of Blanefield, with print-works and another station, is bounded E by Campsie, SE by Baldernock, S by the Stirlingshire portion of New Kilpatrick, SW by its Dumbartonshire portion, and W and N by Killearn. Its utmost length, from N to S, is 4⅝ miles; its utmost breadth, from E to W, is 4⅜ miles; and its area is 9217⅛ acres, of which 149¼ are water. The BLANE, rising on the western side of Earl's Seat, in the NE corner of the parish, at an altitude of 1650 feet above sea-level, runs first, as BALLAGAN Burn, 2⅛ miles south-by-eastward, and next 5¾ miles north-westward, for the last ⅝ mile along the north-western border. It thus has a total course here of 7⅞ miles, though the distance from its source to the point where it quits the parish is but 2⅞ miles as the crow flies. ALLANDER Water flows 2¼ miles south-south-eastward along all the Dumbartonshire border; and the largest of nine sheets of water in the southern half of the parish, Loch Ardinning and Craigallion Loch, have each a maximum length and breadth of 3⅜ and 1⅛ furlongs. The Loch Katrine aqueduct of the GLASGOW Waterworks traverses the parish for a distance of 4½ miles. Along the Blane, in the NW, the surface declines to 100 feet above sea-level; and thence it rises to 634 feet at the western boundary near Auchengillan, 600 near Carbeth, 566 near Loch Ardinning, 1624 at the Strathblane Hills, 1664 at DUMBRECK on the Campsie boundary, 1401 at Dumgoyn, and 1894 at EARL'S SEAT, which culminates just on the meeting-point of Strathblane, Killearn, and Campsie parishes. The Blane's valley, which gives the parish the name of Strathblane, forms a cut or depression across the Lennox Hills, dividing the Campsie Fells on the E from the Kilpatrick Hills on the W. Commencing with a width of less than 1 mile, and expanding to one of nearly 2 miles, it exhibits, from standpoints at its head, a very beautiful view. On the NE side it is screened at one point by a basaltic colonnade, 240 yards long and 30 feet high. The hills on this side are bold, lofty, and picturesque; those on the SW

side are softly outlined, partially wooded, and comparatively low; and the low grounds display an exquisite assemblage of mansions, lakes, woods, and luxuriant corn fields. The prevailing rock of the hills is trap, and that of the low grounds Old Red Sandstone. The soil is sandy in the upper part of the valley, and clayey in the lower. About 3680 acres are in tillage; 2000 acres are under wood; and the rest is mostly hill-pasture. MUGDOCK Castle is noticed separately, as also are the mansions of BALLAGAN, CARBETH-GUTHRIE, CRAIGEND Castle, and DUNTREATH Castle. Five proprietors hold each an annual value of £500 and upwards, and 10 of between £100 and £500. Strathblane is in the presbytery of Dumbarton and the synod of Glasgow and Ayr; the living is worth £280. The parish church is a Gothic edifice of 1803, containing 450 sittings. There is also a Free church; and a public school, with accommodation for 200 children, had (1884) an average attendance of 139, and a grant of £122, 7s. 6d. Valuation (1860) £6095, (1885) £9488, 6s. 7d. Pop. (1801) 784, (1831) 1033, (1861) 1388, (1871) 1235, (1881) 1343.—*Ord. Sur.*, sh. 30, 1866.

Strathbogie, the vale of the river BOGIE on the NW border of Aberdeenshire, and a presbytery partly also in Banffshire. The presbytery, in the synod of Moray, comprehends the *quoad civilia* parishes of Bellie, Botriphnie, Cairney, Gartly, Glass, Grange, Huntly, Keith, Marnoch, Mortlach, Rhynie, and Rothiemay, and the *quoad sacra* parish of Newmill. It figured prominently in the events precurrent to the formation of the Free Church in 1843. The Free Church also has a presbytery of Strathbogie, with churches at Bellie, Botriphnie, Cairney, Gartly, Glass, Grange, Huntly, Keith, New Marnoch, and Rothiemay. See Dr John Stuart's *Extracts from the Presbytery Book of Strathbogie* (Spalding Club, 1843).

Strathdon, a parish of W Aberdeenshire, whose church stands, 952 feet above sea-level, on the right bank of the Don, opposite the influx of the Water of Nochty, 13¾ miles N by W of Ballater, 19⅝ W by S of Alford, 45 W by N of Aberdeen, 17¼ SW of Rhynie, and 21½ SW of Gartly station. With both Gartly and Alford stations Strathdon communicates daily by coach. There are a branch of the Aberdeen Town and County Bank, a post office under Aberdeen, with money order, savings' bank, and telegraph departments, and fairs on the second Fridays of February, May, and November, the last Tuesday of April, the Friday of July after Glass, the Friday of August after Mearns, and the last Saturday of September. The parish, anciently called Invernochty, is bounded NE by Glenbucket, E by the Deskry section of Tarland-Migvie and by Logie-Coldstone, S by Glenmuick and Crathie-Braemar, and W and NW by Kirkmichael and Inveraven in Banffshire. It embosoms the Edinglassie or Glenernan section (8293¾ acres) of Tarland-Migvie parish, which ecclesiastically is united to Corgarff. Its utmost length, from E to W, is 13¼ miles; its breadth varies between 1⅛ and 10¼ miles; and the area is 74½ square miles or 47,737¼ acres, of which 9 are water, and 3557½ belong to an easterly detached portion, already noticed under GLENKINDIE. The trout-ful DON, rising close to the Banffshire border at an altitude of 1980 feet above sea-level, winds 23⅜ miles east-north-eastward—for 5½ miles along the southern boundary of the Edinglassie section of Tarland, and for the last 1⅛ mile along the north-western boundary of its Deskry section—until, near Glenbucket Castle, it passes off from the main body. The chief of its many Strathdon affluents are the Water of NOCHTY, formed by two head-streams at an altitude of 1263 feet, and running 4⅞ miles south-eastward; and DESKRY Water, rising at an altitude of 1800 feet, and over the first 4⅛ miles of its north-north-easterly course tracing all the boundary with Logie-Coldstone, over the last 2¾ furlongs part of that with the Deskry section of Tarland. The surface sinks in the extreme E, where the Don passes off from the main body to 805 feet above the sea; and chief elevations to the N of the river, as one goes up the valley, are the Hill of Cummerton or Lonach (1662 feet), *Breagach Hill (1825), the *Socach (2356), *Carn Mor (2636) *Geal Charn (2207), and *Carn Ealasaid (2600); to the S, Craig of Bunnsach (1742), Mullachdubh (2129), *Meikle Sgroilleach (2432), *Carn a' Bhacain (2442), and *Brown Cow Hill (2721), where asterisks mark those summits that culminate on the confines of the parish. The arable land which lies all in the glens, most of it in that of the Don, consists of considerable haughs, belts of hanging plain, and skirts of pastoral heights; and it possesses in general a light, sharp, and somewhat fertile soil. Hill ranges of considerable height and breadth flank the glens, and render the general aspect of the parish Highland. The hills are prevailingly heath-clad; and in their loftier altitudes are covered with a black spongy soil, inclined to moss; yet in many parts they form good sheep-walks, and in most they abound with game. About one-fifteenth of the entire area is in tillage; fully 5000 acres are under plantations; and the rest is either pastoral or waste. Syenite, limestone, and coarse slate abound, and the limestone has been largely worked. The chief antiquities are noticed under COLQUHONY, CORGARFF, DOUNE, and GLENKINDIE. Mansions, also noticed separately, are AUCHERNACH, CASTLE-NEWE, and GLENKINDIE; and 5 proprietors hold each an annual value of £500 and upwards. Since 1874 giving off its western portion to CORGARFF *quoad sacra* parish, Strathdon is in the presbytery of Alford and the synod of Aberdeen; the living is worth £307. The parish church, built in 1853, is a good Gothic edifice, with a lofty spire and 600 sittings. Upwards of 30 handsome marble tablets adorn the walls of the interior, and produce a most pleasing and striking effect. Five schools—Forbeston female public, Knocklea public, Strathdon public, Ardler, and Tillyduke—with respective accommodation for 50, 41, 96, 59, and 139 children, had (1884) an average attendance of 38, 19, 52, 22, and 40, and grants of £34, 10s., £25, 1s., £47, 15s., £26, 8s., and £32, 19s. 2d. Valuation (1860) £4755, (1885) £8618, 7s. 8d. Pop. (1801) 1354, (1821) 1698, (1841) 1563, (1861) 1459, (1871) 1469, (1881) 1316, of whom 1068 were in Strathdon ecclesiastical parish.—*Ord. Sur.*, sh. 75, 1876.

Strathearn, the basin of the river EARN and its tributaries, in Perthshire. It extends about 32 miles from W to E, and has a mean breadth, including its flanking heights, of 6 to 8 miles. Commencing on the E border of Balquhidder parish, at the head of Loch Earn, it is grandly Highland around that lake and for the first 8 miles of the river; expands into brilliant strath in the western vicinity of Crieff; and thence, in opulence of lowland beauty, proceeds into mergence with Strathtay at the mouth of the Earn. It forms, as a whole, one of the most exquisite tracts of country in Scotland, replete with every element of beauty, and exhibiting almost perfect specimens of very various styles of scenery. Forming with Monteith the ancient province of Fortrenn, Strathearn was the seat of an ancient Celtic earldom, whose first Earl, Malise, was a witness to the foundation charter of Scone (1115). It formed a stewartry, in the hands of the Earls of Perth, till the abolition of the heritable jurisdictions in 1748; and it gave the title of Duke, in the peerage of Scotland, to His Royal Highness the Duke of Kent, father of Queen Victoria.

Strathendry, an estate, with a handsome Tudor mansion, in Leslie parish, Fife.

Strathgarry House, a mansion in Moulin parish (detached), Perthshire, near the right bank of the Garry, 1½ mile SE of Blair Athole.

Strathire. See BALQUHIDDER.

Strathkinness. See ST ANDREWS.

Strathlachlan. See STRACHUR.

Strathmartine. See MAINS.

Strathmiglo, a village and a parish of NW Fife. The village, standing, 200 feet above sea-level, on the river Eden or Miglo, has a station upon the Fife and Kinross section of the North British railway, 2 miles WSW of Auchtermuchty, 6⅜ W of Ladybank Junction, 12¼ WSW of Cupar, and 8¼ NE of Kinross. Strathmiglo proper, which is a burgh of barony, lies on the left or northern

side of the river; on the southern is the modern suburb of Cash Feus; and between is a fine level meadow, the Town Green. The burgh consists of one principal street, of rather an antique and picturesque appearance, running parallel to the river, with four or five wynds diverging at right angles, and a lane called the East and West Back Dykes, passing at the head of the gardens of the feus on the N side. The Kirklands are situated on the S side of the principal street, at its eastern extremity; the Templelands are also on the same side of the street, about the middle of the town; and the Stedmoreland Feus are situated at the western extremity on either side of the street. The suburb of Cash Feus forms a street ½ mile long, of well-built tradesmen's houses, also running parallel with the river. A castellated mansion, Strathmiglo Castle, which stood on a spot a short distance E of the town, is supposed to have been built in the time of James V., but was removed in 1734 as building material for a steeple in front of the town-house. This steeple is a handsome structure, comprising a square tower, terminating in an open balustrade, and surmounted by an octagonal spire 70 feet in height. From the front of it projects a defaced sun-dial, in the shape of a stone pillar; and above are the arms of the Balfours of Burleigh, who acquired the lands of Strathmiglo from the Scotts of Balwearie about the year 1600. Besides a bleachfield, there are two manufactories of damasks, diapers, and other linens. Strathmiglo has a post office, with money order, savings' bank, and telegraph departments, a branch of the Bank of Scotland, 5 insurance agencies, 3 hotels, a hall accommodating about 200 persons, a Young Men's Christian Association, a horticultural society, a gas company, a fair on the last Friday of June, etc. The parish church, built about 1785, contains nominally 750 sittings. One Free church dates from Disruption times, another (the North) till 1876 was Reformed Presbyterian. There is also an Evangelical Union chapel. The burgh acquired its rights so early as 1509, but lost those of them which pertained to its government in 1748, and has since that time been under the public management of a committee annually elected by the feuars. Pop. (1861) 1408, (1871) 1509, (1881) 1283, of whom 698 were in Cash Feus, and 753 were females. Houses (1881) 349 occupied, 23 vacant.

The parish, containing also Edenshead or Gateside village, is bounded N by Abernethy, NE by Auchtermuchty, SE by Falkland, S and SW by Portmoak and Orwell in Kinross-shire, and NW by Arngask. Its utmost length, from E to W, is 5¾ miles; its utmost breadth, from N to S, is 3 miles; and its area is 9026 acres, of which 1¾ is water. Formed at Burnside on the western border by the confluence of Carmore and Beattie Burns, the Eden or Miglo flows 5¼ miles east-north-eastward and eastward, for the last 1¼ mile along or close to the Auchtermuchty boundary. Its chief and earliest affluent is the Glen Burn, rising just within Portmoak, between the West Lomond and Bishop Hill, and running 2¾ miles north-westward. In the extreme E the surface declines to 150 feet above sea-level, and thence it rises to 898 feet at Pitlour Wood on the NE boundary, 600 near Freeland, 645 near Carmore (skirts of the Ochils these three), 447 at Upper Urquhart, 569 near Lappiemoss, and 1713 at the West Lomond—the highest point in all the Fife peninsula. The rocks, in some parts trap, in others sandstone, have been quarried for building material. The soil in the N is mainly a fertile friable loam, in the S is light and sandy. About four-fifths of the entire area are in tillage; some 350 acres are under wood; and the rest of the parish is either pastoral or waste. Down to a comparatively recent period there were numbers of cairns and tumuli, so arranged, and in such position, as to have given Strathmiglo a claim, among other places, of having been the scene of the famous Battle of the Grampians. In the days of the persecution the Covenanters often met in the sequestered vale of the Glen Burn. The principal mansions are Balcanquhal, Edenshead, Pitlour, and Wellfield; and 7 proprietors hold each an annual value of £500 and upwards, 10 of between £100 and £500. Strathmiglo is in the presbytery of Cupar and the synod of Fife; the living is 21 chalders, with manse and glebe. Two public schools, Gateside and Strathmiglo, with respective accommodation for 108 and 354 children, had (1884) an average attendance of 77 and 215, and grants of £66, 13s. 6d. and £209, 9s. 6d. Valuation (1856) £11,394, 2s., (1885) £13,330, 6s. 7d., *plus* £2828 for railway. Pop. (1801) 1629, (1831) 1940, (1851) 2509, (1861) 2261, (1871) 2267, (1881) 2061.—*Ord. Sur.*, sh. 40, 1867.

Strathmore, the far-stretching band of low country which skirts the frontier mountain-rampart of the Highlands, is flanked along the hither side by the Lennox, the Ochil, and the Sidlaw Hills, and extends from the centre of the main body of Dumbartonshire to the German Ocean at Stonehaven. In this large sense it is exceedingly various in breadth, as well as in the features of its scenery; and comprehends part of Stirlingshire, all Strathallan, most part of Strathearn, and all the Howe of Mearns in Kincardineshire. But the strath is more popularly regarded as consisting only of what is flanked by the Sidlaw Hills, and as extending from Methven in Perthshire to a point a little NE of Brechin in Forfarshire; and, in this view, it is somewhat uniform in breadth and feature, and, belonging principally to Forfarshire, has been succinctly described in our notice of that county. This great district is, in the aggregate, remarkably beautiful and fertile; it contains numerous towns, villages, and elegant mansions; and it is the seat of a great and industrious population. See Glamis Castle and Ruthven.

Strathpeffer, a valley, containing a village of the same name, opening off the upper reaches of the Cromarty Firth at Dingwall, and extending for about 5 miles westward from that town. The boundary on the N consists of the Heights of Inchvannie, Brae, and Dochearty, outlying slopes of Ben Wyvis, and on the S of the ridge of Druimchat or the Cat's Back, separating Strathpeffer from Brahan and lower Strathconon. On this ridge is Knockfarrel, one of the best known examples of a vitrified fort. The bottom of the hollow, the lowest part of which is only 20 feet above sea-level, has a good rich clay soil passing into loam, and has evidently at no distant period—geologically speaking—formed part of the bed of the Cromarty Firth. It is highly farmed, and the fields are marked off by fine hedgerows, which, with the neighbouring woods, assist in making the strath one of the prettiest vales in the North of Scotland. The soil of the lower hill slopes is a good reddish loam, but higher up it becomes mossy. The valley is now much disfigured near the centre by a huge embankment, which carries the Dingwall and Skye section of the Highland railway system from the S to the N side of the hollow. This was rendered necessary in consequence of opposition to the line passing farther up the S side; but in an Act of Parliament recently obtained, power has been granted to make a loop past the village of Strathpeffer along the course originally proposed. The greater portion of the valley belongs to the Duchess of Sutherland, Countess of Cromertie, whose mansion is the fine old house of Castle-Leod in the NW, which is at present the residence of her second son, Viscount Tarbat. Some of the trees about it are very old and fine. The hill slopes above it are occupied by the crofting community of Auchterneed or Botlacks, the original holdings in which were granted by Lord Macleod to the veterans of the Highland corps raised on his estate who returned from the great American War. The E end of the valley is in Ross-shire, and the W in Cromartyshire. The drainage is carried off by the Peffery or Pheoran, which flows eastward to the Cromarty Firth. (For other particulars, see Fodderty.) Strathpeffer has a station on the section of the Highland railway already mentioned, 4 miles W of Dingwall; and the village is 1 mile S by W of the station, but this inconvenience will be remedied when the new loop line is constructed. It owes its fame to its mineral springs, which, rising from calcareo-bituminous sandstones belonging to the Old Red Sand-

stone formation, to which they owe their virtues, are highly impregnated with various salts that make them highly beneficial in digestive and kidney disorders, as well as in cases of rheumatism and skin disease; but the water must be taken under advice. The springs vary in quality, but on an average a gallon of water may be taken as containing 13·659 cubic inches of sulphuretted hydrogen gas and 107·484 grains of the various salts in solution, this being made up of 52·710 grains of sulphate of soda, 30·686 grains of sulphate of lime, 19·233 grains of chloride of sodium, and 4·855 grains of sulphate of magnesia. There is a pump-room, with a range of baths; and a bowling-green, and walks, both in the grounds and all round the neighbourhood, provide for outdoor amusement, while for bad weather and indoor recreations there is a large pavilion. The air is clear and bracing. The proprietrix has done much to improve the place. There are three large hotels, and most of the other houses have been erected for the accommodation of visitors during the season, which lasts from the beginning of May to the end of October. A stone pillar with an eagle—the crest of the Munros—carved on it, is said to mark the site of a clan battle in the latter part of the 15th century, in which the Munros of Foulis were defeated by the Mackenzies of Seaforth; and near it some years earlier (in 1478) another conflict took place, in which the Mackenzies were victorious over a body of the Macdonalds of the Isles. There is a post office, with money order, savings' bank, and telegraph departments, under Dingwall; and an omnibus plies between the village and the station, and a coach to and from Dingwall. See Dr D. Manson *On the Sulphur and Chalybeate Waters of Strathpeffer Spa* (5th edition, 1884).—*Ord. Sur.*, sh. 83, 1881.

Strichen (old forms *Stratheyn* and *Strichney;* Gael. *Strath-a'en*, 'the strath of the river'), a parish containing a small town of the same name in the Buchan district of Aberdeenshire. It is bounded N by detached portions of the parishes of Aberdour and Fraserburgh, NNE by the parish of Rathen, E by the parish of Lonmay, S by a detached portion of Banffshire, and by the parish of Old Deer, SW by the parish of New Deer, and WNW by the parish of Tyrie. The boundary is formed for 1¾ mile on the N by the Ugie, which separates Strichen from the detached section of Aberdour, and for 2½ miles on the S by the same river which here separates the parish from Old Deer and the detached section of Banffshire. Elsewhere it partly follows the courses of small burns, but is mostly artificial. The greatest length, from the extreme E point beyond New Leeds to the point on the W where the parishes of Tyrie, Strichen, and New Deer meet beyond Craigculter, is 6⅞ miles; the average breadth at right angles to this is about 2⅝ miles; and the area is 10,206⅝ acres, of which 23 are water. The surface is hilly, and the height above sea-level rises from the centre of the parish towards both the NE and SW. The lowest point (125 feet) is where the Ugie leaves the parish on the SE, and the highest points are 769 feet at Mormond Hill (NNE), 440 at Adziel Hill (SSW), and 383 in the woods of Strichen House. Though a considerable amount of land was reclaimed between 1824 and 1855, a third of the parish is still peat-moss, rough-grazing, or waste; about 400 acres are under wood; and the rest is arable, but the soil is, on the whole, poor, though there are patches of good land here and there. The underlying rocks are granite and Lower Silurian beds. The impure limestones in the latter were formerly worked. The drainage of the parish is carried off by the northern branch of the Ugie—which, besides forming part of the northern and southern boundaries as already noticed, has a course of 2⅝ miles from NW to SE across the centre of the parish—and small streams flowing to it. The greater part of the parish was originally in Rathen and the rest in Fraserburgh, but a church and family burial aisle having been erected in 1620 by Thomas Fraser,* proprietor of Strichen, the parish was constituted in 1627, and its disjunction confirmed by Act of Parliament in 1633. The great-grandson of this Thomas was the Hon. Alexander Fraser of Strichen (d. 1775) who, under the title of Lord Strichen, was one of the judges of the Court of Session from 1730 till his death, and as such took part in the trial of Isabella Walker, the prototype of Effie Deans, in 1736, and also in the decision of the Douglas Cause in 1768. Lord Strichen's great-grandson, Thomas Alexander (1802-75), succeeded to the Lovat Estates in 1816, and made good his claim to the dormant peerage of Lovat in 1857. He had previously, however, sold the estate of Strichen in 1855 to George Baird (1810-70), one of the Gartsherrie family, in the possession of whose son, George Alexander Baird, it now is. (See Stitchel.) The mansion, Strichen House, about ⅝ mile SW of the centre of the parish at the town, is a three-story building, measuring 126 by 90 feet, erected in 1821. It is Grecian in style, and has a portico with fluted Doric pillars. The finely wooded grounds, originally laid out by Gilpin, contain a stone circle, and the ruins of an old chapel a little to the W of the house. This is the circle mentioned in Dr Johnson's *Tour*, where he says he and Boswell 'dined at the house of Mr Frazer of Streichton, who showed us in his grounds some stones yet standing of a druidical circle, and what I began to think more worthy of notice some forest trees of full growth.' Boswell adds that they went out of their way to see the circle, as Dr Johnson was anxious to inspect an example. Their entertainer was Lord Strichen's son, at one time an officer in the King's Dragoon Guards, and seemingly a somewhat eccentric personage. It was he who founded the village of New Leeds, which was intended to be a rival to the great Yorkshire town of that name, but which never throve, and is only a poor straggling hamlet. There were to be statutory fairs, and the laird offered a prize of an eight-day clock to the 'drunkest man that should appear' in the first of those markets. This same Captain Fraser erected 'Rob Gibb's Hunting Lodge,' on the W side of Mormond Hill, and also caused the well-known 'White Horse of Mormond' to be cut on the SW slope of the Hill. The stag on the SE slope was cut in 1870. (See Mormond.) The horse is represented as standing stiffly erect, and measures 162 feet from the point of the nose to the tip of the tail, and 126 feet from hoofs to ears, while the body is 106 feet long and 41 deep. The parish is traversed along the centre for 6½ miles from SW to ENE by the Fraserburgh extension of the Formartine and Buchan branch of the great North of Scotland railway system, with stations at the town of Strichen and at Mormond near the ENE border. Two main lines of road from Aberdeen to Fraserburgh also pass through the centre and E end, and there are good district roads.

The Town of Strichen was originally laid out as the village of Mormond, by Lord Strichen, in 1764, to promote 'the Arts and Manufactures of this country, and for the accommodation of Tradesmen of all Denominations, Manufacturers, and other industrious people to settle within the same.' It is now a thriving little place, with pretty surroundings, almost exactly in the centre of the parish, on the NE bank of the Ugie, on flat ground at the SW end of Mormond Hill, and has a railway station 10¼ miles SSW of Fraserburgh, 18¾ W by N of Peterhead, and 36¾ N by W of Aberdeen. The two principal streets meeting at the N end are well-built, and there is a town-hall, Established, Free, Episcopalian, and Roman Catholic churches, a public, an Episcopalian, and Nichols Free schools, branches of the North of Scotland and the Town and County banks, agencies of 7 insurance companies, a post office, with money order, savings' bank, insurance, and telegraph departments, under Aberdeen, a public library, a gas company, an agricultural society, a company of rifle volunteers, and three hotels. There are live stock markets on the first Thursday of every month, and hiring fairs on the Wednesdays after the 19th May and the 12th November. The town-house was erected by Mrs Fraser of Strichen in 1816 at a cost of £2000. The

* The Frasers of Strichen were a branch of the house of Lovat, through Thomas Fraser of Knockie.

present parish church, to the S of the town, built near the site of the old one in 1799, has 950 sittings. There is a burial-ground to which an addition was made in 1874, but the parishioners long continued to bury at Rathen, and some of the *lych-stanes*, where the bearers rested, may still be seen along the old road, over Mormond Hill. The church bell came from the old building, and has the inscription, '*Henrick Ten Horst me fecit Daventria anno*, 1633.' The Roman Catholic church, to the W of the town, built in 1854, was, with the priest's house and a croft, reserved for the Church of Rome, when the estate was sold to Mr Baird. None of the other churches call for notice. In the neighbourhood of the town the Ugie is crossed by a railway viaduct and four stone bridges. Of these two are modern—one having replaced an old bridge near the S end of the town—while the others are old, that to the N being a high-backed structure. The second, at Howford, was built in 1777. Pop. of town (1861) 1030, (1871) 1184, (1881) 1204, of whom 511 were males and 693 females. Houses (1881) 298 occupied, 4 unoccupied, and 2 being built.

The parish is in the presbytery of Deer and the synod of Aberdeen, and the living is worth £200 a year. Ecclesiastically a portion of the W of the parish is given off to the *quoad sacra* parish of New Pitsligo. Besides the churches already mentioned, there is a U.P. church at New Leeds. Under the school board (5 members) Strichen public school, at the town, with accommodation for 262 pupils, had, in 1884, an attendance of 163, and a grant of £141, 11s. The Episcopal school (All Saints) has accommodation for 160. Mr G. A. Baird owns almost the entire parish, and 22 others hold each between £50 and £20. Valuation (1860) £6581, (1885) £13,296, 16s. 5d., of which £1802 is for the railway. Pop. (1801) 1520, (1831) 1802, (1861) 2472, (1871) 2318, (1881) 2348, of whom 1074 were males and 1274 females, while 2013 were in the ecclesiastical parish. Houses (1881) 493.—*Ord. Sur.*, shs. 87, 97, 1876.

Stroan Loch. See Kells.

Strome Ferry, a place in Lochalsh parish, SW Ross-shire, on the southern shore of salt-water Loch Carron (3 furlongs broad here), and at the terminus of the Dingwall and Skye railway (1870), 53 miles WSW of Dingwall. It has a post office, with money order, savings' bank, and telegraph departments, a steamboat pier, and a good hotel; whilst on the opposite side of the loch are a small inn and the picturesque ruins of Strome Castle, which existed prior to 1472, and was blown up by Kenneth Mackenzie of Kintail in 1602. On Sunday, 3 June 1883, Strome Ferry was the scene of a Sabbatarian riot.—*Ord. Sur.*, sh. 81, 1882.

Stromness, a town and a parish in the SW of Pomona, Orkney. The town, skirting the W side of a beautiful bay, by road is 14½ miles W by S of Kirkwall, and by water 27 miles NNE of Duncansbay Head, 35 NNE of Scrabster Pier, Thurso. With Kirkwall it communicates by public coach and steamer, and with Scrabster by steamer, as also with Leith, Aberdeen, Scalloway, Stornoway, Liverpool, and other seaports. At the beginning of last century it consisted of only half a dozen slated houses and a few scattered huts, the former inhabited by two gentlemen of landed property and two or three small traders, the latter by a few fishermen and mechanics; and it then had only two vessels, each of 30 tons, and both employed in catching cod and ling at Barra, and making an annual voyage to Leith or Norway. Its rising importance, from the visits of the American rice-ships, drew the attention of the burghers of Kirkwall, and brought upon it a persecution whose origin and upshot form an interesting chapter in the history of Scottish burghs. Founding on an obscure act of 1690, which declared that the export or import of native or foreign commodities, with some exceptions, belonged only to freemen inhabiting royal burghs, and on a subsequent act of 1693, which declared that the benefit of trade allowed to royal burghs might be communicated to other places on condition of their paying cess, Kirkwall made exactions upon Stromness with inequality of distribution, and with most vexatious, unrelenting, and illegal severity. The people of Stromness complied with the exactions from 1719 till 1743; but, seeing ruin coming on their trade, they then resisted, and entered on a successful litigation against their oppressors before the Convention of Royal Burghs, the Court of Session, and the House of Lords. In 1754 they obtained from the second of these courts a declaration that 'there was no sufficient right in the burgh of Kirkwall to assess the village of Stromness, but that the said village should be quit thereof, and free therefrom, in all time coming;' and, in 1758, after their relentless persecutors had dragged them to the House of Lords, they obtained from that court of final appeal a decision affirming the declaration of the Court of Session. By this decision all the villages in Scotland became free and independent of the royal burghs; and Stromness grew rapidly in importance, in 1817 being erected into a burgh of barony. It has not, however, altered much since 1847, when Hugh Miller described it as 'a narrow, tortuous slip of a town, nearly a mile long, and fairly thrust by a steep hill into the sea, on which it encroaches in a broken line of wharf-like bulwarks, where, at high water, vessels of a hundred tons burden float so immediately beside the houses, that their pennants on gala days wave over the chimney tops. This steep hill, 292 feet high, and called the Ward Hill, forms part of a granitic axis, about 6 miles in length by a mile in breadth, which forms the backbone of the district, and against which the Great Conglomerate and lower schists of the Old Red are upturned at a rather high angle.' The bay or natural harbour excels in safety and commodiousness the great majority in Britain. It extends 1⅝ mile from S to N, and is entered by a passage ¼ mile wide, but expands in the interior to a width of 3 furlongs. Sheltered to the S by Graemsay Island, and at its mouth by the Inner and Outer Holms, it has a firm clay bottom, and sufficient depth of water for ships of 1000 tons burden, and is protected from the violence of every wind. Two substantial patent slips admit vessels of 700 tons burden; and a new and commodious pier was opened in 1879. The American vessels in the rice trade formerly unloaded here their cargoes for the different ports of Britain, but were afterwards induced to prefer the Isle of Wight. Many vessels, owing to the excellence of the harbour, call at Stromness for shelter, provisions, or men; and among them are annually the Hudson's Bay vessels. An agent of the Hudson's Bay Company resides in the town. A considerable number of vessels belong to the port; and many boats are employed in the local fisheries. Boat and ship building is carried on to a noticeable extent; but the manufacture of linen and woollen cloth has been long discontinued; and the making of straw-plait, which formerly employed a large number of women, is also quite extinct. A weekly market is held on Wednesday; cattle fairs are held on the first Wednesday of every month, the Wednesday before Wasdale Market, and the first Tuesday of September. Stromness has a post office, with money order, savings' bank, and telegraph departments, a submarine cable (1876) to Scrabster, branches of the Commercial, National, and Union Banks, two hotels, a gas company, a natural history society with a good museum, a court-house, a reading-room, a lifeboat, etc. The parish church, built in 1814, contains 1200 sittings; the Free church dates from Disruption times; and the U.P. church, with 643 sittings, was erected in 1862. George Stewart, the 'Torquil' of Byron's *Island*, a poem on the mutiny of the 'Bounty' (1789), was the son of Stewart of Masseter, and lived in the White House, one of the earliest mortar-built houses in Stromness; and Gow or Smith, the hero of Scott's *Pirate*, was born in a house where now is the boat-building yard of Messrs Copland. He revisited Stromness in 1724, the year before his execution in London. Sir Walter himself was here in 1814, and Hugh Miller in 1847, when from the neighbouring flagstones was exhumed the specimen of *Asterolepis*, referred to in his *Footprints of the Creator*. It may also be noticed that in the churchyard is buried William New-

lands (1782-1884), the 'king of the Orkney Gipsies.' Sheriff small debt courts are held on the third Thursday of March, June, and September, and the first Thursday of December; justice of peace small debt courts on the last Thursday of every month. The town is governed by 2 bailies and 9 councillors, who also act as police commissioners under the General Police and Improvement (Scot.) Act of 1862. Its municipal voters numbered 158 in 1885, when the annual value of real property was £6090. Pop. (1831) 2524, (1841) 2057, (1851) 2055, (1861) 1795, (1871) 1634, (1881) 1705, of whom 1021 were females. Houses (1881) 370 inhabited, 8 vacant, 4 building.

The parish is bounded N by Sandwick, NE by the Loch of Stenness, SE by the Bay of Ireland, S by Hoy Sound, and W by the Atlantic. Its utmost length, from N to S, is 4½ miles; its utmost width is 4 miles; and its land area is 7618 acres. The W coast, 3½ miles long, rises everywhere sheer from the sea to altitudes of from 60 to 363 feet; exhibits terrific grandeur of scenery during storms; and terminates at the southern extremity in Breck Ness, flanking the entrance to Hoy Sound. It is pierced there by a cave, called Johnson's Cave, after a shipwrecked sailor who spent four days in it in 1834. A chain of hills, prolonged southward from Sandwick, and attaining a maximum height of 518 feet above sea-level, extends from the northern boundary to within about 1½ mile of Hoy Sound; and commands impressive views of the hills of Hoy and the northern mountains of the Scottish mainland. Limestone abounds; roofing slates were largely quarried a century ago; and granite and lead have both been formerly worked. A mineral spring of some medicinal repute is in the vicinity of the town. The soil of the arable lands is variously a black earth, a sandy black earth, a stiff clay, and a mixture of clay and sand. Much has been done on the Cairston estate in the way of draining, building, and other improvements, the late J. R. Pollexfen, Esq., having expended £4000 thereon; and the bare hill at the back of the town has of late years been converted into useful pasturage by the feuars amongst whom it was divided. Breckness House, near the headland of that name, was built in 1633, as an Episcopal residence, by George Graham, the last Bishop of Orkney; and above the door are carved his initials, the date, and the Episcopal arms. A little SW of the town are the ruins of the old parish church, with the graveyard and the remains of an old monastery; and in other places are ruins of ancient chapels whose history is lost to record. Stromness is the seat of Cairston presbytery in the synod of Orkney; the living is worth £205. Two public schools, Kirbuster and Stromness, with respective accommodation for 65 and 443 children, had (1884) an average attendance of 40 and 264, and grants of £56, 5s. and £256, 8s. Valuation (1860) £3603, (1884) £6095. Pop. of parish, (1801) 2223, (1831) 2944, (1861) 2540, (1871) 2403, (1881) 2410.

Stronachlachar. See Katrine, Loch.

Strone, a modern watering-place in Kilmun parish, Argyllshire, at the headland of Strone Point, which projects sharply between the mouth of Holy Loch and that of Loch Long, 6½ miles WNW of Greenock, and 7 furlongs N of Hunter's Quay. Extending along the shore of Holy Loch, it chiefly consists of a chain of villas and *cottages ornées;* commands superb views of the scenery of Holy Loch and the Firth of Clyde; vies in general attraction with the best and newest of the sea-bathing resorts of the Glasgow citizens; communicates several times a day by well-appointed steamers with Greenock and Glasgow; and has a post office, with money order, savings' bank, and telegraph departments, a good hotel, a steamboat pier, an iron public hall (1872; 400 sitings), a *quoad sacra* parochial church, an 'Alliance' church, and a public school. The *quoad sacra* parish, constituted in 1884, is in the presbytery of Dunoon and the synod of Argyll. Pop. of village, together with Blairmore, (1881) 539.—*Ord. Sur.*, sh. 29, 1873.

Stronfearnan, a village in Kenmore parish, Perthshire, on the northern shore of Loch Tay, 9 miles WSW of Aberfeldy.

Stronsay, an island in the North Isles district of Orkney, approaching to within 2¼ miles S by E of Spur Ness in Sanday, 2⅝ E of Veness in Eday, 3 E of the Ness of Ork in Shapinshay, 7 NNE of Mull Head in Pomona, and 12 NE of Kirkwall. Its utmost length, from NNW to SSE, is 7¼ miles; its utmost breadth is 4⅞ miles; and the land area of the entire parish is 16,404 acres. By the Bay of Holland on the S, Odin and Mill Bays on the E, Papa Sound on the NE, and St Catherine's Bay on the W, Stronsay is cut into three peninsulas in such a way that no part of it is more than 1 mile distant from the sea, and that its coast-line has an extent of not less than 35¼ miles. The principal headlands are Links Ness and Huip Ness to the N, Grice Ness, Odin Ness, and Burgh Head to the E, and Lamb Head, Tor Ness, and Rousholm or Roithisholm Head to the S—all of them low, except Burgh and Rousholm Heads; while five islets, lying off its shores, are Papa-Stronsay to the NE, Auskerry to the S, Linga Holm to the W, and Little Linga and Holm of Huip to the N. The largest of eleven small lakes are Meikle Water (5 × 2 furl.; 28 feet above sea-level) towards the centre, and Lea Shun (4½ × 3½ furl.) in the S. Three mineral springs, all near one another on the E coast, were once in high medicinal repute. The surface is of moderate elevation; but an almost continuous ridge running through the island attains 154 feet at Burgh Hill in the SE, and 141 at St John's Hill in the N. The predominant rocks are clay and sandstone, and lead-ore has been found. The soil is mostly a strong clay, with a rich red clay soil; but Rousholm, the south-western peninsula, consists largely of sandy soil. The interior was formerly a tract of the flayed moorland common in Orkney, but now it is all improved or nearly so. The island is traversed by good roads; and much has been done in the way of reclamation, building, fencing, etc., in the course of the last forty years. Antiquities are tumuli, some Picts' houses, and a circular thick-walled structure at Lamb Head. The property is mostly divided among three. The parish of Stronsay and Eday comprises the inhabited islands of Auskerry, Eday, Papa-Stronsay, Pharay, and Stronsay, all of which are noticed separately. It comprehends no fewer than five ancient parishes—Eday and Papa-Stronsay, each consisting chiefly of its cognominal island; and St Peter's, St Nicholas, and Lady, consisting respectively of the northern, southern, and western sections of Stronsay. Besides the kirks of these parishes, there were anciently so many as 10 chapels—4 in Stronsay, one of which was called St Margaret's Kirk; 2 in Papa-Stronsay, dedicated respectively to St Nicholas and St Bride; 1 in Eday; and 1 in each of the pastoral islets of Little Linga, Linga Holm, and Auskerry. The ruins of the majority of these chapels still exist. Stronsay and Eday is in the presbytery of North Isles and the synod of Orkney; the living is worth £280. Stronsay parish church, built in 1821, contains 500 sittings; and Stronsay U.P. church, built in 1800, contains 391 sittings. Three new public schools—Central, North, and South—with respective accommodation for 126, 70, and 70 children, had (1884) an average attendance of 48, 32, and 44, and grants of £53, 18s., £18, 2s., and £40, 13s. Valuation of parish (1860) £3692, (1884) £4543. Pop. of parish (1801) 1642, (1831) 1827, (1861) 2207, (1871) 2210, (1881) 2107; of Stronsay island (1841) 1234, (1861) 1210, (1871) 1267, (1881) 1274.

Strontian, a village in Ardnamurchan parish, Argyllshire, in the mouth of a glen on the N side and towards the head of salt-water Loch Sunart, 21 miles ENE of Tobermory, and 24 SW of Fort William. At one time a filthy clachan, it underwent in 1828 a total revolution under the direction of Sir James Riddell and his lady, and now consists of some renovated turf huts and neat slated cottages of granite. It has a post office, with money order, savings' bank, and telegraph departments, an inn, a *quoad sacra* parochial church, a Free church, a

public school, and fairs on the Thursday before the last Wednesday of May, the Friday after the third Thursday of June, old style, and the Thursday before the last Wednesday of October. The *quoad sacra* parochial church was built in 1827 at the expense of Government, and contains nearly 500 sittings. Strontian House, in the vicinity of the village, is the seat of Sir Rodney Steuart Riddell, fourth Bart. since 1778 (b. 1838; suc. 1883), who holds 54,418 acres in the shire, valued at £3673 per annum. Lead mines in the glen to the N of the village were worked from the beginning of the 18th century till 1855. They contain a great variety of very rare calcareous spars, with splendid specimens of the staurolite; and are famous for having yielded, in 1790, a metal of the alkaline earths, known ever since to naturalists as strontian, and then found in them in the form of strontites of carbonate of strontian. The *quoad sacra* parish is in the presbytery of Mull and the synod of Argyll. Pop. (1871) 803, (1881) 691, of whom 633 were in Ardnamurchan and 58 in Morvern.

Stronvar, a mansion in Balquhidder parish, Perthshire, near the southern shore and the foot of Loch Voil, 5½ miles SW of Lochearnhead. It is a Scottish Baronial edifice, built in 1850 from designs by the late David Bryce, R.S.A. Its owner, David Carnegie, Esq. (b. 1813), holds 22,205 acres in the shire, valued at £3558 per annum.—*Ord. Sur.*, sh. 46, 1872.

Strowan, a mansion in Monzievaird and Strowan parish, Upper Strathearn, Perthshire, near the right bank of the Earn, 3 miles W of Crieff. Built in the latter half of the 18th century, and greatly enlarged in 1866, it is the seat of Thomas James Graham-Stirling, Esq. (b. and suc. 1811), who holds 3566 acres in the shire, valued at £3386 per annum, and who has spent between £20,000 and £30,000 in improving the estate.—*Ord. Sur.*, sh. 47, 1869. See chap. xxxix. of T. Hunter's *Woods and Estates of Perthshire* (1883).

Struan. See Blair Athole and Bracadale.

Struy, a place, with a public school, in Kilmorack parish, Inverness-shire, between the confluent Farrar and Glass, 10 miles WSW of Beauly, under which it has a post office.

Stuart Castle. See Castle Stuart.

Stuartfield. See Stewartfield.

Stuckgown House. See Arrochar.

Sueno's Stone. See Forres.

Suilven. See Assynt.

Sulem or **Sullom Voe,** a voe or sea-loch on the E side of the mainland of Shetland, striking 8⅛ miles south-south-westward between Northmaven and Delting parishes, and varying in breadth between 3 furlongs and 2¾ miles.

Summerhill. See Machar, New.

Summerhill. See Ayton.

Summer Isles, a group of islets at the entrance of Loch Broom, on the W coast of Ross and Cromarty. Only one of them, Tanera More, is inhabited, and only nine or ten are of sufficient size to be occupied as pastures. They lie at from 5 furlongs to 4 miles distance from the coast, and are composed of Old Red Sandstone. Tanera More is 1⅝ mile long and 1⅜ broad; and has an irregular rocky surface, rising to the height of 406 feet above sea-level. The other islets are all similarly rocky, but of much less elevation. The whole group are bare; and except where their bluff coasts are worked into caverns and points by the incessant action of the sea, they possess not one feature of picturesqueness or beauty. 'Why they are called the Summer Islands,' says Dr Macculloch, 'I know not; as they have a most wintry aspect, as much from their barrenness and rocky outlines, as from the ugly red colour and the forms of their cliffs.' Pop. of Tanera More (1871) 114, (1881) 119.—*Ord. Sur.*, sh. 101, 1882.

Sunart, a district in the extreme N of Argyllshire. Its length is 12 miles, and its breadth 6. It is bounded on the N by Loch Shiel, on the E by Ardgour, on the S by Loch Sunart, and on the W by Ardnamurchan. See Ardnamurchan, and Sunart, Loch.

Sunart, Loch, a sea-loch of Argyllshire, winding 19½ miles eastward, from the northern entrance of the Sound of Mull, to within 5 miles of Loch Linnhe. It separates Ardnamurchan and Sunart on the N from Mull and Morven on the S. Its breadth, for the first 5 miles, is generally upwards of 2 miles, but afterwards varies between 3 and 11 furlongs. It contains a number of islets, the chief of which are Oransay, Carnich, Riska, Dungallan, Garve, and More. Glen Tarbert—a rough pastoral valley—extends from its head to Loch Linnhe, and brings down to it a parliamentary road from Corran Ferry, whence the communication is continued to Fort William. Loch Sunart, though little visited, possesses considerable scenic beauty.

Sunderland Hall, a mansion in Selkirk parish, Selkirkshire, between the confluent Tweed and Ettrick Water, 2½ miles N of Selkirk town. Its owner, Charles Henry Scott-Plummer, Esq. (b. 1859; suc. 1880), holds 3483 acres in Selkirk and Roxburgh shires, valued at £3408 per annum.—*Ord. Sur.*, sh. 25, 1865.

Sunderland House, a modern mansion in Kilchoman parish, Islay island, Argyllshire, 5 miles W of Bridgend.

Sundrum, a mansion in Coylton parish, Ayrshire, on an eminence near the left bank of the Water of Coyle, 5½ miles E of Ayr. Its oldest part is a tower of unknown antiquity, with walls 10 feet in thickness, whilst the modern portion dates from 1792. Acquired by his grandfather in 1750, the estate now belongs to John Hamilton, Esq. (b. 1806; suc. 1837), who holds 2944 acres in the shire, valued at £4280 per annum.—*Ord. Sur.*, sh. 14, 1863. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Sunlaws, an estate in Roxburgh parish, Roxburghshire, on the E side of the Teviot, 1¼ mile SSE of Roxburgh station. The mansion, a handsome Tudor edifice, with a lofty tower, was totally destroyed by fire on 16 Jan. 1885, the damage being estimated at £2500. Its owner, William Scott-Kerr, Esq. (b. 1807; suc. 1831), holds 2662 acres in the shire, valued at £3154 per annum.—*Ord. Sur.*, sh. 25, 1865.

Sunnyside Asylum. See Montrose.

Sutherland (Scand. *Suther-land*, 'the southern land,' *i.e.*, the land to the S of Caithness), a county in the extreme N of Scotland bounded N by the Atlantic Ocean, E by the county of Caithness, SE by the Moray Firth, SSW by the Dornoch Firth and the counties of Ross and Cromarty, and WNW by the Minch and the Atlantic Ocean. In shape it is an irregular pentagon with the apex to the NW at Cape Wrath. The side along the N measures 41 miles in a straight line from Cape Wrath eastward to a point midway between the Bay of Bighouse at the mouth of Glen Halladale and Sandside Bay at Reay in Caithness—the distance following the windings of the coast is nearly double—the E side measures 30½ miles in a straight line from the point just indicated to the Ord of Caithness; the SE side 24 miles in a straight line from the Ord of Caithness to the point at the entrance to the Dornoch Firth; the SSW side 49 miles in a straight line from this point to Loch Kirkaig at Enard Bay—the distance following the windings in all these cases being somewhat more—and the distance along the WNW side, from Loch Kirkaig to Cape Wrath, is in a straight line 35¾ miles, but following the windings it is double that length. The distance from Rhu Stoer, which is the most westerly point, east-north-eastward to the point where the boundary-line with Caithness reaches the Atlantic, is 59 miles, and the distance from Cape Wrath south-eastward to the point at the N side of the entrance to the Dornoch Firth is 63¼ miles. The total area is 2125·717 square miles or 1,360,458·731 acres, of which 1,298,459·732 are land, 47,633·406 are water, 12,812·299 are foreshore, and 1553·294 are tidal water. Of the whole land area of 1,298,459·732 acres, only 39,996 acres were in 1884 under crop, bare fallow, and grass, and 12,260 acres under wood, all the rest being rough hill grazing, heath, peat, or stony waste. The increase in land under plough and grass has been 11,179 acres within the last thirty years, and of that under wood 1447 acres. The climate varies considerably. Along the

Moray Firth coast and in the straths the mean annual temperature is about 45°. In the lower districts snow does not lie long, and the winters are comparatively mild and open, but in spring there are cold N to E winds, and in autumn the glens are early visited by sharp frosts. Among the uplands of the interior of the county the winters are long and severe. The rainfall in the low district along the Moray Firth is on an average little over 31 inches, and along the N coast it is 36 inches, but in the W and NW, where the winds from the Atlantic bring in large quantities of vapour, it rises to 60 inches. The prevailing winds are westerly and north-westerly, and those next in frequency are from the E, and are generally wet. Rain falls, on an average, on 200 days in the year. Among the counties of Scotland Sutherland is fifth as regards area, the larger ones being Inverness, Argyll, Ross and Cromarty, and Perth; but it is twenty-eighth as regards population—the only ones below it being Bute, Peebles, Nairn, and Kinross—and twenty-ninth as regards valuation. In proportion to area it is the least densely populated county in Scotland, the average number of persons to the square mile being only 12, while Inverness-shire with 22 comes next.

Along the E side the boundary line follows the rising ground forming the watershed to the E of Strath Halladale—with the Halladale river flowing to the N—and Strath Beg and Strath Ullie—with the river Ullie or Helmsdale flowing to the S. To the E of Strath Halladale the height is nowhere over 900 feet, and is generally between 700 and 800, but to the E of the valley of the Helmsdale the average height is from 1000 to 1700 feet, the highest points being Cnoc Crom-uilt (1199), Knockfin Heights (1416), Cnoc Coirena Fearna (1434), Cnoc an Eireannaich (1698), Creag Scalabsdale (1619), Cnoc na Maoile (1315), Cnoc na Saobhaidhe (1206), Cnoc an Damhain (1324), and thence by Cnoc an Tubhadair (1078) and the road over the Ord of Caithness (726) to the sea. The run of the boundary along the SSW side has been indicated in describing the boundaries of Ross-shire, the greater part of it being formed by the river Oykell. The N and NW sides are deeply indented by sea-lochs. On the N from Cape Wrath eastward are Balnakill Bay with the Kyle of Durness, Loch Eriboll, Tongue Bay and the Kyle of Tongue; Torrisdale Bay at the mouth of Strath Naver, with the lesser bays of Farr, Swordly, and Kirtomy to the E; Armadale Bay, Strathy Bay, and Bay of Bighouse ($\frac{1}{2} \times \frac{1}{2}$ mile) at the entrance to Strath Halladale. To the E of Balnakill Bay is a long narrow promontory (2 miles × 3 furl.) terminating in Fair Aird or Far-out Head; the broad projecting mass of land to the E of the entrance to Loch Eriboll is Kennageall or Whiten Head; to the NE of Farr Bay is Farr Point, and between Armadale Bay and Strathy Bay there is a projecting mass terminating on the N at Strathy Point. Near the entrance to Loch Eriboll are Eilean Hoan and the smaller Eilean Cluimhrig; at the entrance to Tongue Bay are the Rabbit Islands, and 1½ mile NE, Eilean Iosal and Eilean nan Ron, separated from the mainland by Kyle Rannoch (½ mile); and there are a number of smaller islands. The only inhabited island is Ron, which is separately noticed, as is also Hoan. The WNW side is still more broken than the N. From Cape Wrath southward are Sandwood Bay with the shallow Sandwood Loch, Loch Inchard, Loch Dougal ($1\frac{1}{4} \times \frac{1}{2}$ mile), Loch Laxford with Loch a'Chathaidh branching off its N side, Scourie Bay, the large Edderachylis or Eddrachillis Bay from which branch off Badcall or Badcaul Bay, Loch Cairnbawn [see Kylesku] branching eastward into Loch Glendhu and Loch Glencoul, Loch Ardvar ($1 \times \frac{1}{4}$ mile), Loch Nedd ($\frac{3}{4} \times \frac{1}{4}$ mile), and Clashnessie Bay; Bay of Stoer, Achmelvich Bay, Loch Roe ($1 \times \frac{1}{4}$ mile), Loch Inver ($2\frac{1}{2} \times \frac{3}{4}$ mile), and Loch Kirkaig ($1\frac{1}{2} \times \frac{1}{4}$ mile). The only very prominent headland is Rhu Stoer, with the Point of Stoer on the SW side of Eddrachillis Bay. There are an immense number of islands, of which the chief are Eilean an Roin Beag and Eilean an Roin Mor (5×1 furl.) 2 miles NW of the mouth of Loch Inchard, Handa S of Scourie Bay, separated from the mainland by Sound of Handa, Calbha Beag and Calbha Mor [see Calva] at the entrance to Loch Cairnbawn, Oldany in the S of Eddrachillis Bay, and Soyea at the entrance to Loch Inver. Handa was formerly inhabited, but is not so now, and Oldany had in 1881 a population of 4 persons. Fuller details will be found in the separate articles dealing with the places noted. Both the N and NW coasts are bold and rocky, and some of the cliff scenery is very fine and impressive, particularly about Durness, Cape Wrath, and the island of Handa. On the Moray Firth side the ground is generally low and sandy, and the only opening is Loch Fleet.

Districts and Surface.—In the extreme NW of the county is Durness, and from this eastward along the N coast are the districts of Tongue, Farr, and the Sutherland portion of Reay, while extending down the W coast are Eddrachillis and Assynt. In the SE along the Moray and Dornoch Firths are the Helmsdale, Loth, Brora, Golspie, Rogart, Dornoch, and Creich districts, and N of the latter at the lower end of Loch Shin is the Lairg District. The minor subdivisions are almost all connected with the straths, and will be afterwards noticed. The moorland waste between Kyle of Durness and Cape Wrath is known as Parph, and is marked on the map in Blaeu's *Atlas* as haunted by 'verie great plenti of wolfes;' while Sir Robert Gordon says that 'there is an excellent and delectable place for hunting called the Parve wher they hunt the reid deir in abundance.' Between Loch Eriboll and the Kyle of Tongue is A'Mhoine. Round the greater part of all the coast except in the extreme NW, in the bottom of the larger glens, and round most of the large lochs there are tracts of low ground, occupying about $\frac{1}{10}$ of the whole county, which nowhere rise to a height of more than 500 feet. Of the remainder the greater part is from 500 to 1000 feet high, while portions here and there reach heights of from 2000 to 3000 feet, and at one or two points rise above 3000. 'The whole of the interior,' says a recent writer, 'is mountainous, varied with elevated plateaus covered with heath, vast fields of peat bog, some pleasant straths of average fertility, watered by considerable streams and numerous lakes, embosomed either in bleak dismal regions of moorland, or begirt by a series of hills of conglomerate, whose naked and rugged sides have no covering, even of heather. Wildness and sterility are the great features of the landscape, the dreary monotony being seldom relieved by tree or shrub; and this uniformity of desolation is only occasionally broken by some glen or strath presenting itself as an oasis of verdure in the bleak desert;' but this description, though in the main fairly correct, hardly conveys an adequate idea of the number of the straths or of the extent to which many of the lochs and glens have had much of their bleak appearance softened or removed by fringes of wood.

Though the higher hills can hardly be said to form regular chains or groups, but are scattered about, solitary, with picturesque and curious outlines, or in broad-based lumpish masses without any markedly characteristic features at all; yet the mountainous moorland forming the main portion of the surface is divided into quite distinct portions by a number of straths with well-marked trends. These fall into two great divisions. If a line be drawn from Cape Wrath south-eastward to the centre of the county at Beinn Cleith Bric (Klibreck; 3154 feet), and thence E by N to the centre of the boundary line with Caithness, it will be found that all the hollows to the N and E of these lines in part of Durness, Farr, Tongue, and Reay, run from N to S, while all over the rest of the county the direction of the valleys is from SE to NW. Along the northern portion the principal glens are Strath Dionard southward from the Kyle of Durness, Strath Beag southward from the head of Loch Eriboll, the hollow of Loch Hope and Strath More southward from the entrance to Loch Eriboll, the hollow of Kyle of Tongue and of Amhainn Ceann Locha at its head, the

valley of the Borgie and Loch Laoghal, and Strath Naver, both southward from Torrisdale Bay. Strath Naver is the largest valley on the N coast, and near the upper end it branches off W by S into the hollow in which is Loch Naver and the river Mudale, and eastward into a hollow leading to that in which are Lochs nan Cuinne, a' Chlair, and Baddanloch, which send off their surplus water to the river Helmsdale. Southward from Strathy Bay is the hollow drained by Strathy Water, and from Bay of Bighouse Strath Halladale extends inland to Forsinard. Short straths extend inland south-eastward from most of the large lochs on the NW coast, but they are neither so large nor well-marked as those in the N; the chief one is that from Lochs Inchard and Laxford, by Loch Stack and Loch More. Along the Moray Firth coast beginning at the NE end the principal hollows are Strath Ullie or Helmsdale, the short Glen Loth, the hollow occupied by Loch Brora and dividing at its upper end into the Valley of the Black Water and Glen Skinsdale (both N) and Strath Brora (W), the small Dunrobin Glen behind Dunrobin Castle, Strath Fleet, and Strath Carnach, both branching off from the head of Loch Fleet, and the great hollow of the Dornoch Firth and Strath Oykell. From the latter at Invershin the great hollow occupied by the river Shin and Loch Shin branches off to the N and NW, and continues by Loch Merkland through the narrow glen of Allt Ceann Locha, to the low ground extending down the sides of Loch More and so to the NW coast. The highest point all along is little over 400 feet above sea-level, and the hollow is traversed by the main line of road from the SE to the W coast. Near the lower end of Loch Shin the minor Strath Tirry branches off to the N and NW, and off Strath Oykell, which has here an E and W direction 6½ miles above Invershin, Glen Cassley branches away to the NW.

Several of the points that reach a height of over 1000 feet have already been mentioned in describing the boundary between Sutherland and Caithness, and others are Creag an Oir-airidh (Hill of Ord; 1324) NE of Helmsdale; Eldrable Hill (1338), Beinn na Meilich (1940), and Creag a Mheasgain (1346) between Helmsdale and Glen Loth; Beinn na h-Urrachd (2046) and Beinn Dobhrain (2060), both at the head of Glen Loth; and from these the high ground curves round by Creag Mhor (1581), Cnoc a' Chrubaich Mhoir (1382), Meall an Liath Beag (1512), Meall an Liath Mor (1608), Beinn Smeoral (1592), and Beinn Chol (1767) towards Loch Brora, on the opposite, or south-western, side of which is Beinn nan Corn (1706), with the shoulders of Meall Odhar (1326) to the W and Cagar Feosaig (1239) to the SE. On the opposite side of Dunrobin Glen is Beinn Lundie (1462 feet), with the shoulders of Cnoc na Gamha (1220) to the S and Beinn a Bhragie (1256) to the SE behind Golspie. In the district bounded N by the hollow of Strath Fleet, S by the Dornoch Firth, and W by the river Shin, only a few patches rise over 1000 feet, and none of them to any great extent, the highest points being Beinn Donuill (1144 feet) near the centre, and An Stoc-bheinn (1104). To the W of the river Shin, and between Loch Shin and Glen Cassley, the heights have a continuous summit-level of over 1000 feet except at two points near the SE end. The highest points from SE to NW are Cnoc a Choire (1318 feet), Carn nam Bo Maola (1389), Beinn Sgreamhaidh (Ben Screavie; 1428), Carrachar Dubh (1238), and Maol a' Bhealaich (Maolveally; 1673), from which a narrow ridge leads to Ben Leoid (2597) between the glens leading up from Loch Glendhu and Loch Glencoul. To the W of Ben Leoid is Beinn Aird da Loch (1722 feet) between the lochs just mentioned, and E of it Meall an a Chuail (1500), with Meall na Leitreach (1852) to the NW and Meall an Fhuir Loch (2010) to the NE. To the N of Loch Glendhu is Beinn a Bhutha (1777 feet), NW of which beyond Loch an Leathad Bhuain (Led Vuan) is Ben Dreavie (1500), and farther N still at the NW end of Loch More and overlooking Loch Stack is the isolated Ben Stack (2364). To the S of Loch Cairnbawn is Quinag (2653 feet), with shoulders Sail Ghorm (2551; NW), Sail Garbh (2100; N), and Spidean Coinich (2508; S). To the S of this is Loch Assynt, and in the district bounded by the Loch on the N, the river Loanan on the E, and the county boundary at Loch Veyatie and Fionn Loch on the S, are Beinn Garbh (1769 feet), Canisp (2779), and the curious Suilven (The Sugar Loaf; 2399). To the NE, E, and SE of Loch Assynt are Glas Bheinn (Glasven; 2541 feet), Beinn Uidhe (Uie; 2384), Beinn an Fhurain (Ben an Uran; 2500), Ben More Assynt (3273), with a western top Coinnemheall (Coniveal; 3234), to the S of which is Breabag (2670). The heights along the Cromalt Hills on the boundary with a detached portion of Cromarty have been already noticed under Ross-shire. The southern shoulder of Ben More Assynt is Carn nan Conbhairean, and to the SE of it is the outlying summit of Meall an Aonaich (2345 feet), which is cut off by the hollows of the Ruathair and Muic from the high ground that stretches away to the SE between the upper Oykell and the Cassley with an average height of about 1200 feet, the highest points being near the centre at Carn na Ceardaich (1633) and Beinn na Eoin (1785). In the south-western district between Loch Inchard and the Kyle of Durness and lower Strath Dionard a height of over 1000 feet is reached at several points, but only Creag Riabhach (1592 feet), Meall na Moine (1522), and Farrmheall (Farveal; 1709) rise to over 1500. At the head of Strath Dionard a line of heights commences and stretches south-eastward into the centre of the county, being divided into minor sections by cross glens. The highest points from NW to SE are Foinne Bheinn (Foinaven) with its different tops Ceann Garbh (2952 feet), Ceann Mor (2980), and Creag Dionard (2554); Arcuil (2580), Meall a' Chuirn (Meall Horn; 2548), Sabhal Mor (2288), Sabhal Beag (2393), Meall Garbh (2471), Meall an Liath (2625), Carn Dearg (2613), Carn an Tionail (2484), Riabhaich (2500), Ben Hee (2864), Creag Dhubh Mhor (1821), Creag Dhubh Bheag (1500), Meall an Fhuarain (Uaran; 1549), Beinn Cleith Bric (Klibreck) with the tops of Meall an Eoin (3154) and Carn an Eild (2500), and the lumpy mass of Beinn an Armuinn (Ben Armine) with the tops of Creag na h-Iolaire (2278) and Creag Mhor (2338). Between Strath Dionard and the head of Loch Eriboll are Beinn Spionnaidh (2537 feet) and Grann Stacach (2630); between Strath More and the head of Kyle of Tongue is Ben Hope (3040), with the north-eastern shoulders Creag Riabhach Bheag (1521), Creag Riabhach Mhor (1500), and Meall an Liath (1952); 5 miles E of Ben Hope is Ben Laoghal (Ben Loyal; 2504), and on the opposite side of Loch Laoghal is Beinn 's Tomaine (Ben Stomine; 1728); while 12 miles ESE near the sources of the Helmsdale river are Ben Griam Bheag (1903) and Ben Griam Mhor (1936).

Rivers and Lakes.—Sutherlandshire may be divided into three different drainage basins, by lines drawn from Cape Wrath south-eastward by Creag Riabhaich, Fionne Bheinn, and Meall a' Chuirn to Carn Dearg; from Carn Dearg southwards by Ben Leoid, Beinn an Fhurain, and Breabag to the E end of the Cromalt Hills; and from Carn Dearg in a winding course by the N end of Ben Hee, the S end of the high ground at Creag Dhubh Bheag, the S end of Beinn Cleith Bric, to Creag na h-Iolaire, thence N by E along the E border of upper Strath Naver, and thereafter in a winding course eastward to Forsinard. In the district to the N of the first and third of these lines and covering about half the whole county the general inclination is to the N, and all the rivers run to the Atlantic, the chief from W to E being the Chearbhaig; the Claigionnaich, the Buaigheal Duibhe, and the Dionard all flowing to Kyle of Durness; the Amhainn an t' Stratha Beag, at the top of Loch Eriboll, and the river Hope, near the entrance; the Melness, near the entrance to the Kyle of Tongue, the Amhainn Ceann Locha at its head, and the Allt an Rian on the E side at the village of Tongue; the Allt an Dearg at Kyle Rannoch; the Borgie and the Naver —with upper tributaries, the Mudale Bagaisteach

(Bagastie) and Mallart—at Torrisdale Bay; Strathy Water at Strathy Bay; and the Halladale—with upper tributary Dyke Water—at Bay of Bighouse. In the district W of the first and second lines, and covering about one-sixth of the whole county, the streams flow westward or north-westward to the Minch and the Atlantic. The chief are, from N to S, the Sinairidh, flowing into Sandwood Bay; the Laxford, flowing to Loch Laxford; the Inver, flowing from Loch Assynt to Loch Inver, and its upper continuation, the Loanan, flowing into Loch Assynt at Inchnadamff; the Amhain na Clach Airidh, also flowing to Loch Inver; and the Kirkaig from Fionn Loch and Loch Veyatie, flowing along the boundary with Ross and Cromarty to Loch Kirkaig. In the third division, between the second and third of the lines mentioned, and covering one-third of the county, the rivers flow in a south-easterly direction to the Moray Firth. The principal streams, from NE to SW, are the Helmsdale, Loth Burn, the Brora, the Black Water, Golspie Burn, the river Fleet, the river Evelix, and the Oykell, with its tributaries the Shin and the Cassley.

The county is full of lochs of all sizes, from Loch Shin ($16\frac{3}{8} \times 1\frac{1}{2}$ mile; 270 feet above sea-level) down to mere tarns. There are said to be more than 250 in the Assynt district alone, and 70 may be counted from the summit of Quinag. The western drainage basin is simply a network of small lochs and lochans. The principal sheets of water—which alone it is possible to mention here—are:—(in the northern drainage basin) Loch Airidh na Beinne, W of Kyle of Durness; Loch Hope (12), E of Loch Eriboll; Loch na Seilg and Loch a' Ghabha Dhuibh, high up Ben Hope; Loch an Dith-reibh (Deerie), in the glen upward from Kyle of Tongue; Loch Creagach and Loch Laoghal (both 369), in the hollow of the river Borgie; Loch Naver (247) and Lochs a' Bhealaich and Coir' an Fhearna (both 570), in the upper part of Strath Naver, to the W and N respectively; and Loch na Meide (518), to the NW; Loch Meadie (405), SE of Farr; Loch Leum a Chlamhain (770), between the two Ben Griams: (in the south-eastern basin) Loch an Ruathair (415) and Loch Truid Air Sgithiche (Loch Truderscaig; 426), Loch nan Cuinne, Loch a' Chlair, and Loch Baddanloch (all 392); Loch Allt an Fhearna (433) and Loch na Moine (377), all in the upper waters of the Helmsdale river; Loch Brora (91), on the Brora; Loch Migdale (115), E of Bonar-Bridge; Loch Shin (270), Loch a' Ghriama (304), and Loch Merkland (368), all in the valley of the Shin; Loch Fiodhaig (Fiack), on one of its feeders; and Loch Ailsh (498), on the upper part of the Oykell: (in the western drainage basin) a chain of small lochans E by S of Loch Inchard; Loch Stack (118) and Loch More (127), both in the valley of the Laxford river; Loch an Leathaid Bhuain (Led Vuan), discharging by the Muldie Burn into Loch Glendhu; Loch Leothaid (Leoid), W of Quinag; Loch Assynt (215), in the valley of the Inver; Loch Crocach, 2 miles N of Lochinver; Loch na Gainimh (Ganive), between Canisp and Suilven; parts of Fionn Loch (357) and Loch Veyatie (366), and the whole of Cam Loch (405), Loch Urigill (515), and Loch Borrolan (460), all in the valley of the Kirkaig. The fishing in all the streams and lochs is very good, especially for trout. There is a remarkable subterranean lake in the Cave of Smoo in Durness. All the chief hills, rivers, and lochs are separately noticed; and for farther details reference may be made to the particular articles dealing with them.

Geology.—Along the W border of Sutherlandshire, an extensive area is occupied by those crystalline Archæan rocks which might not inaptly be regarded as the foundation stones of Scotland. From the wild headland of Cape Wrath they can be traced at intervals rising from underneath the Cambrian sandstones to Loch Inchard, and from the latter sea-loch they cover a belt of ground along the coast S to the county boundary at Loch Inver. From the top of one of the minor hills at Scourie the observer can descry, for miles around, that peculiar type of scenery which is found nowhere else in Scotland. Bare, rounded hummocks and bosses of grey gneiss follow each other in endless succession, and in the hollows there are pools and lochs filling rock basins. Huge boulders are strewn over the barren hummocks, which, with the highly polished surfaces of the gneiss, give one a vivid impression of the glaciation of that region. With certain prominent exceptions, these verdureless knolls and hills of Archæan gneiss do not rise much above one uniform level, which only tends to increase the monotony of the landscape. On closer examination we find that many of the ridges have a persistent NW trend, and that even the prominent elevations, such as Ben Stack, possess rib-shaped features trending in a similar direction. These peculiar features are due to the prevalent strike of the highly crystalline gneiss which, as a rule, runs NW and SE. Numerous mineral localities are to be found in the area occupied by the Archæan gneiss, some of which have been minutely described by Dr Heddle. The rocks in the neighbourhood of Scourie are not only interesting for their lithological varieties, but also for the minerals contained in them. Garnets abound in the hornblende rocks on the shore S of the village, and at the NW promontory of the Bay of Scourie, hydrous anthophyllite with small crystals of talc or ripidolite is to be met with. Not far to the S of Cape Wrath, Professor Heddle found an interesting mineral locality yielding chert, moss-agate, actinolite, hydrous anthophyllite, steatite, and ripidolite, and he also found a thin vein of chalcopyrite and chrysocolla in the gneiss to the SE of Rhiconich. In the gneiss and pegmatite on Ben Kennabin and other localities, agalmatolite is found in considerable abundance. An interesting feature connected with the veins of pegmatite is the occurrence in them of crystals of titaniferous iron, which disintegrate under the influence of atmospheric agencies, and the grains form a black sand strewn along the seashore.

This undulating plateau of bare gneiss hills was originally covered by a vast pile of Cambrian sandstones which have since been removed by denudation. Notwithstanding this excessive waste, there are still extensive relics of these overlying sedimentary deposits in the extreme NW of the county and in Assynt. Between Cape Wrath and the Kyle of Durness they form one of the noblest cliffs in Scotland, reaching a height of 650 feet, and yet neither the base nor the top of the series is exposed in this section. Between Loch Inchard and the Kyle of Durness, however, the unconformable junction between the Cambrian sandstones and the Archæan gneiss is admirably exposed at various localities. From the researches of the Geological Survey it appears that they are divisible into certain zones, the lower portion of the series consisting of breccias, conglomerates, and alternations of grits and conglomeratic sandstones. These graduate upwards into red sandstones, indicating deposition in deeper water. By a series of remarkable dislocations, which will be referred to in the article on the geology of Scotland, the unconformable base line of the Cambrian formation has been repeatedly shifted, and hence, as the observer traverses the region from Rhiconich to Cape Wrath, he crosses again and again the same succession of beds. In Assynt the unconformability at the base of the Cambrian strata is well marked, and in that region, too, the geologist cannot fail to realise the enormous denudation to which these red sandstones have been subjected. The great terraced escarpments of Suilven, now completely isolated from Quinag, Canisp, and Coul More, with which they were at one time connected, enable one to compute the thickness of the vast pile of strata since removed by denudation.

A careful examination of the sections in Sutherlandshire proves beyond doubt that there is a marked unconformability between these Cambrian sandstones and the Silurian strata overlying them. On the slopes of Quinag and Canisp, the white quartzites at the base of the Silurian series being inclined at a higher angle, cross the successive beds of Cambrian sandstone which are nearly horizontal or tilted at a gentle angle to the SE. Indeed, this unconformable relation is so strongly marked that the observer can trace it, even in the far

distance. Still more striking proof is obtained in the Durness area, for to the W of the Kyle of Durness the Silurian quartzites pass transgressively across the edges of the underlying Cambrian sandstones till they rest on the Archæan gneiss. It is apparent, therefore, that prior to the deposition of the Silurian sediments there must have been extensive denudation of the Cambrian deposits.

The various subdivisions of the Silurian formation as developed in this county will be given in the article on the geology of Scotland. From the quartzites at the base of the formation, a regular order of succession has been established through the fucoid beds and serpulite grit to the limestones at the top of the series. In the Durness area, where the limestones yield fossils, and where they are typically developed, the Silurian strata are arranged in the form of a basin, which has been isolated from the same series of rocks in the Eriboll area by normal faults. On the E side of these great dislocations there rises a prominent escarpment of Archæan gneiss, which is traceable from Kennabin near Durness, S by Ben Spionnu, Ben Stack, to Quinag in Assynt. The E slope of this ridge is covered by the quartzites at the base of the Silurian series, followed by the fucoid beds, serpulite grit, and the limestone, which are repeated by a series of folds and reversed faults. Eventually, at various localities along the line from Eriboll to Assynt, the Archæan gneiss is brought up by means of a great reversed fault or thrust plane, and is made to overlie the Silurian strata. This is followed by another great thrust plane or reversed fault, which ushers in the eastern schists with a general dip to the ESE at gentle angles. The peculiar features of these schists as well as the order of succession will be given elsewhere in this volume. At present it will be sufficient to state that throughout a large part of the county the metamorphic rocks are remarkably uniform in character, consisting of flaggy gneiss and mica schist, and that, disregarding minor folds, the general inclination of the beds is to the ESE. An interesting band of limestone is met with on the banks of Loch Shin at Shinness and Arskaig, which has yielded to Professor Heddle a rich variety of minerals. In approaching the limestone the mica schists and gneiss become more hornblendic, while a bed of hornblende rock immediately overlies the limestone. In the contact zone the following minerals, among others, were obtained by Dr Heddle: Biotite, Actinolite, Tremolite, Asbestos, Augite, Pyrite, Sahlite, Sphene, Apatite, Chlorite, Steatite, etc. He regards the specimens of sphene found at this locality as the finest in Britain.

Several important masses of granite and syenite occur among the eastern schists: one forms the tract of high ground round Ben Loyal; another, Ben Stomino; a third occupies a tract on the county boundary at the head of Strath Halladale; a fourth extends from Lairg to near Rogart station; a fifth is situated to the N of the Dornoch estuary on the Migdale Hill; while a sixth occurs at the Ord, and is traceable SW by Helmsdale to Lothbeg. The granite forming Ben Loyal, which is perhaps one of the most picturesque mountains in Sutherland, is fine grained, containing quartz, felspar, black mica, and hornblende. From this centre boulders were dispersed in great numbers during the glacial period, two of which deserve special notice on account of the rare series of minerals which they yielded to the Rev. Dr Joass and Professor Heddle. Occurring on the E slope of Ben Bhreck, in the line of the ice movement from Ben Loyal, there can be little doubt that they were derived from that mass. In or near a small exfiltration vein traversing one of these boulders the following minerals, among others, were found: Babingtonite, Fluor spar, Sphene, Allanite, Magnetite, Ilmenite, Amazon stone, Strontianite, etc. Of these, perhaps the most interesting are the beautiful green-tinted crystals of Amazon stone.

Resting unconformably on the metamorphic rocks of Sutherland, there are numerous outliers of Old Red Sandstone which evidently belong to the lower division of that formation. They have not, as yet, been found to the W of the Kyle of Tongue; but on the hills immediately to the E of this arm of the sea there are large masses of coarse conglomerate, and also on the Roan Islands at the mouth of the Kyle. On the ridge to the E of the Kyle, the conglomerate can be traced more or less continuously from Coalbackie by Cnoc Vreckan to the slopes of Ben Stomino, where the materials consist mainly of granitic detritus. A similar outlier occurs on the crest of Ben Armine. There are two prominent hills in the E of Sutherland, however, that rise with steep slopes from the undulating moorland of schist and gneiss which owe their special features to cappings of coarse conglomerate, viz., Ben Griam More and Ben Griam Beg. With the strata inclined at low angles, and forming a series of parallel lines, they remind one of the great cone of Morvern in Caithness. In Kirktomy Bay, and again to the E of Strathy Point, strata of the same age occur. At the former locality they consist of red sandstones, with nodular bands and red sandy clays. At the latter point they are traceable from Strathy Bay E by Melvich to the county boundary. At the base there is a pink granite breccia, with thin seams of sandstone passing upwards into a group of flagstones forming bluff cliffs, which show excellent sections of the beds. From the researches of Dr Archibald Geikie it appears that there is a gradually ascending series from the county boundary W to Bighouse Bay; but at the latter locality the beds dip to NNE. At the Portskerry Harbour the unconformability is admirably seen, the crystalline gneiss and granite being covered by a thin breccia passing up into yellow and greenish sandstones, which yielded to Mr C. W. Peach an ichthyolite like *Glyptolæmus*. Still further W, near Baligill, grey and red sandstones, with flagstones and calcareous shales yielding *Dipterus*, *Osteolepis*, and *Coccosteus*, are to be found. At this locality also a thin seam of workable limestone is intercalated with the Old Red strata.

The patches of Old Red Sandstone just described are insignificant in extent compared with the area which they cover along the E seaboard. From Ben Uarie near the Glen of Loth they can be followed S by Ben Smeorail, Ben a Braghie, to the mouth of the Dornoch Firth. Forming a belt of ground averaging 5 miles in width, they consist mainly of coarse conglomerates resting unconformably on the highly denuded metamorphic rocks. That this great development of conglomerate is of no great thickness is apparent from the fact that the river Brora has cut through the deposit, exposing the platform of crystalline rocks on both sides of the valley. Still more interesting is the narrow belt of flagstones resembling a part of the Caithness flagstone series, which is wedged between two faults on the shore between Helmsdale and Lothbeg. The relations of these flagstones were first described by Professor Judd, who showed that the belt of strata which is about 5 miles long and about ½ mile broad, is bounded on the W side by a fault bringing them into conjunction with a mass of granite, while on the E side they are truncated by a fault throwing down strata of Upper Oolite age. He suggests that the great fault bounding the Secondary strata in Sutherlandshire divided into two branches along 5 miles of its course, and that the patch of Old Red flagstones has been preserved between these branching faults. The best section of the strata occurs in the Gartymore Burn N of Port Gower, where they consist of calcareous flags, red and green argillaceous beds with red and white sandstones. From these beds a fragment of *Coccosteus* has been obtained, so that there can be no doubt that they belong to some portion of the Caithness flagstone series.

Along the E coast of Sutherland from Helmsdale to the Ord—a distance of about 16 miles, a belt of Secondary strata can be traced more or less continuously, which are evidently but fragmentary relics of formations originally having a great development. By means of a powerful fault running parallel with the coast, they have been brought into conjunction with the metamorphic and associated igneous rocks already described.

Partly on account of the presence of coal seams in this area, and partly owing to the abundance of fossils in many of the beds, this development of Secondary strata has been examined and described by numerous investigators. The recent researches of Professor Judd has added largely to our knowledge of the order of succession of these beds and of the physical conditions which prevailed during their deposition. The strata occupying the lowest geological position, consisting of sandstones overlaid by a peculiar cherty calcareous rock, are to be found on the sea shore between Dunrobin and Golspie, in Dunrobin Glen, and in the burn of Golspie. Regarded by Professor Judd as the equivalents of the reptiliferous sandstones and cherty rock of Triassic age in Elginshire, they have, as yet, yielded no fossils to determine their horizon. They are immediately followed by sandstones and conglomerates containing pebbles derived from the foregoing strata, marking the base of the Lias. To these succeed a group of estuarine strata, consisting of sandstones, shales, and coal seams, the latter being extremely thin; and towards their upper limits, they graduate into blue micaceous clays with shelly limestones yielding marine fossils characteristic of the Lower Lias, such as *Belemnites acutus, Ammonites caprotinus, A. oxynotus, Pholadomya ambigua, Pecten liasinus, P. tumidus, P. sublævis, Lima punctata, Gryphæa obliqua,* etc. The strata just described are overlain by the representatives of the Middle Lias, consisting of micaceous clays with pyrites and nodules of argillaceous limestone, inclined to the NNE at a gentle angle. It is probable that the members of this subdivision are truncated by a fault on the N side throwing down the clays of Middle Oolite exposed at Clayside. This much is certain that none of the sections in Sutherland shows the relations of the Lias to the Lower Oolites. The latter are represented by sandstones, shales, and coals, in large part estuarine, and followed by marine strata on the horizon of the lower part of the Middle Oolite. The estuarine strata of Lower Oolite age are of special importance, as they contain the seams of coal which have led to repeated but not very successful mining operations. The main seam of coal, from 3 to 4 feet thick, is overlain by a roof-bed marking the base of the Middle Oolite. In places it really forms a good coal, being composed of the crushed stems of *Equisetites columnaris,* but the presence of a thin layer of pyrites considerably affects its economic value. It occurs on the shore at Brora, in the valley of the river Brora, and other localities. Owing to the estuarine character of the strata, the order of succession varies considerably, even within a short distance. Several remarkable examples of this phenomenon are given by Professor Judd, but one will suffice to show their variable character. In the section at Cadh-an-Righ on the Rossshire coast the position of the Main Coal seam is represented only by a carbonaceous band about 5 inches thick.

Overlying the estuarine series just described, we find a considerable development of marine beds alternating with estuarine strata representing the Middle Oolite. At the base, there is a prominent band known as the roof-bed of the coal-bearing strata, consisting of a hard calcareous sandstone, charged in the lower part with plant remains, and in the upper part with marine shells. In virtue of the fossils obtained from this band it has been placed on the same horizon as 'the Kelloway Rock' in Yorkshire. This zone is succeeded by a mass of clayey and sandy strata, the former yielding *Ammonites ornatus, A. Jason, Belemnitus Owenii, B. hastatus, Cerithium muricatum, Gryphæa dilatata.* In the thin zone of marine sandstones overlying these clays the following fossils have been found: *Ammonites cordatus, A. perarmatus, A. excavatus, Belemnites sulcatus,* etc. Next in order comes a considerable thickness of sandstones, probably of estuarine origin, which have been extensively quarried on the Braamberry and Hare Hills, as they form an excellent building stone. These are followed by a bed of grey sandy limestone regarded by Professor Judd as the equivalent of the Coralline Oolite, and yielding *Ammonites excavatus, A. cordatus, A. vertebralis,* with species of the genera *Pecten, Pholadomya, Modiola, Lima,* etc. This horizon is overlain by clays, sandstones, and limestones, the latter alternating with dark clays which probably mark the highest beds of the Middle Oolite in this county.

In the neighbourhood of Braamberry Hill, the foregoing series is succeeded by certain strata marking the base of the Upper Oolite. This important group—the true position of which was first defined by Professor Judd—is represented in Sutherland by shales, sandstones, and grits, seemingly of estuarine origin, and reaching a thickness of about 1000 feet. They extend along the shore from the neighbourhood of Clyne to Green Table near the Ord—a distance of 11 miles, being repeated by a series of anticlinal and synclinal folds, which afford excellent opportunities for studying the characters of the beds. Between Garty and the Ord they present certain remarkable features deserving of special notice. At Kintradwell and Lothbeg the strata possess their usual characteristics; but to the N of Garty, blocks of foreign rocks are embedded in the grits and limestones, till at the Ord these included fragments are so abundant and of such a size, that a special name has been assigned to them. They were first described by Sir Roderick Murchison as the 'brecciated beds of the Ord,' which aptly indicates their remarkable features. At certain localities, as at Colyburn, the blocks consist of the same material as the matrix, both yielding fossils of Secondary age; but such is not the case at the Ord. At the latter locality huge blocks of Caithness flags, with hard sandstones and shales, are embedded in the matrix; the former yielded to Hugh Miller fish remains of Old Red Sandstone age, while the matrix contains Jurassic fossils. It is somewhat remarkable that these 'brecciated beds' should alternate with finely laminated shales, thin sandstones with ammonites, and even thin layers of lignite, indicating deposition in still water. These alternations only show the rapid changes in the physical conditions which prevailed during the period of the Upper Oolite in that region. From the fossils found in the matrix of the 'brecciated beds' and the strata associated with them, there can be no doubt of their geological horizon. The suggestion has been thrown out by Professor Judd, that violent floods may have occurred at intervals during that period, when subangular masses of the parent rocks, with trunks of trees, may have been borne seawards, and that ice rafts may have helped in the transport of the materials.

In connection with the organic remains found in the Upper Oolites of Sutherland, reference ought to be made to the rich flora which they contain, consisting of ferns, cycads, and coniferæ, so eloquently described by Hugh Miller in his *Testimony of the Rocks.* But in addition to the plant remains, masses of coral, ammonites, and belemnites are abundantly found in these strata. The following forms have been obtained: *Ammonites biplex, A. triplicatus, A. alternans, Belemnites abbreviatus, B. obeliscus, B. spicularis, Lima concentrica, L. laeviuscula, Pecten vimineus, Ostrea Bruntrutana, O. expansa, Rhynconella Sutherlandi, Terebratula Joassi,* etc. Between Navidale and Green Table, the shales, grits, and limestones just described are succeeded by light-coloured sandstones, becoming ferruginous in places which as yet have not yielded any fossils. According to Professor Judd, these sandstones form the highest beds found *in situ* of the Secondary formations on the E coast of Scotland.

During the glacial period, the ice radiated from the high grounds of Sutherland in different directions. Along the W coast the general trend of the ice markings is towards the NW; on the N coast the direction varies from N to NNW; while on the E side of the watershed the striæ point towards the Moray Firth. Amongst the glacial deposits, the enormous development of moraines claims special notice. It is interesting to observe the relics of these ancient glaciers along the margin of the 50-feet beach at various points in the county, thus clearly indicating the existence of glacial conditions in comparatively recent geological time.

Economic Minerals.—The bed of limestone in the

SUTHERLAND SHIRE.
British Miles.
1 2 3 4 5 6 7 8 9 10
5° Longitude West from Greenwich
4°
58°
NORTH SEA
Cape Wrath
Far out Head
The Whiten Head
Strathy Head
Kinnaird Head
Kincardine
Golspie
Brora
Dornoch
Tain
Loch Laxford
Loch Inchard
Loch Assynt
Loch Inver
Loch Enard
Loch Shin
Loch Naver
Strath Carron
Strath Halladale
Strath Brora
Strath Fleet
Strath Oykel
Strath Shin
Strath Naver
Strath Kildonan
Strath Helmsdale
Strath Brora
Strath Fleet
Strath Oykel
Strath Carron
Strath Halladale
Strath Naver
Strath Kildonan
Strath Helmsdale
PART OF CROMARTY SH.
PART OF ROSS SH.
PART OF CAITHNESS SH.
PART OF SUTHERLAND SH.
PART OF DORNOCH FIRTH
PARISH OF DURNESS
PARISH OF EDDERACHYLIS
PARISH OF ASSYNT
PARISH OF LAIRG
PARISH OF CREICH
PARISH OF GOLSPIE
PARISH OF CLYNE
PARISH OF KILDONAN
PARISH OF LOTH
PARISH OF DORNOCH
PARISH OF TAIN
PARISH OF ROGART
PARISH OF CREICH
PARISH OF GOLSPIE
PARISH OF CLYNE
PARISH OF KILDONAN
PARISH OF LOTH
PARISH OF DORNOCH
PARISH OF TAIN
PARISH OF ROGART

metamorphic series was formerly wrought at Shinness, and likewise the calcareous band in the Old Red Sandstone at Strathy, and several of the beds of limestone on the E seaboard, N of Golspie. Numerous attempts have been made to work the coal seams in the Lower Oolite, but owing to the presence of iron pyrites in the beds, their value for household purposes is much impaired. Excellent building stone is obtained from the sandstone quarries on Hare Hill and Braamberry Hill, the stone being in much request for its white colour and excellent quality. It was used in the erection of London Bridge, Dunrobin Castle, and other important buildings. Some years ago extensive operations were carried on in search of gold, with no satisfactory success. From the observations made by the Rev. Dr Joass, it appears that gold was found at the following localities: in the Blackwater, Strath Brora, at the head of Clyne-Milton Burn, in the Helmsdale river and the Kildonan Burn, in the Suisgill Burn, and other places. The gold in the Suisgill and Kildonan Burns was found in water-rolled stones, composed of felspar and quartz. He makes the following important statement, that since many of the streams were searched in vain, it 'suggests no widespread deposit, the result of extensive glaciation, but several independent centres connected with the local rocks.'

Soils and Agriculture.—The arable land is entirely confined to the lower part of the county, and mainly to the narrow strip along the SE coast, where the soil, though generally light, yields good returns to skilful farmers. The soil there varies from light sandy and gravelly loam through clay-loam and black loam to a stiff clay. The black loam occurs in patches, and the clay is mostly in the parish of Loth, particularly in the small tract of carse land near the mouth of the Burn of Loth. In Assynt there is practically no arable land, and in Durness little over 300 acres; but elsewhere, particularly in Strath Helmsdale, Strath Naver, Strathy, and Strath Halladale, there are patches of light soil along the edges of the rivers. The rest of the county is given up to grazings for cattle and sheep or to deer forests, of which there are four—Dunrobin, among the hills to the N of the Castle, containing 12,180 acres; Ben Armine, about the hill of the same name, containing 35,840 acres; Glen Canisp, about Canisp, containing 34,490 acres; and Reay, farther N about Ben Stack, containing 64,600 acres—a total of 147,110 acres devoted to this purpose. The rental of the four forests is about £4500. The grouse moors are good, and they are also used for grazing purposes. A large portion of the county is and must ever remain practically a heathy and rocky waste. Agricultural improvements under such conditions were very late of being attempted, especially as the county was the last district in Scotland to be opened up to free intercourse with the outer world; and their first introduction was accompanied by that transference of population known as the 'Sutherland Clearances,' the wisdom of which still forms such a vexed question among the friends of the crofters. The small tenants had, in the beginning of the present century, spread all over the county, taking 'advantage of every spot that could be cultivated, and which could with any chance of success be applied to raising a precarious crop of inferior oats, of which they baked their cakes, and of bere from which they distilled their whisky. Impatient of regular and constant work, all heavy labour was abandoned to the women, who were employed occasionally even in dragging the harrow to cover in the seed. To build their huts or to get in their peats for fuel, or to perform any other occasional labour of the kind, the men were ever ready to assist; but the great proportion of their time, when not in the pursuit of game or of illegal distillation, was spent in indolence and sloth. Their huts were of the most miserable description; they were built of turf dug from the most valuable portions of the mountain side. Their roof consisted of the same material, which was supported upon a wooden frame constructed of crooked timber taken from the natural woods belonging to the proprietor and of moss-fir dug from the peat bogs. The situation they selected was uniformly on the edge of the cultivated land and of the mountain pastures. They were placed lengthways, and sloping with the declination of the hill. This position was chosen in order that all the filth might flow from the habitation without further exertion upon the part of the owner. Under the same roof and entering at the same door were kept all the domestic animals belonging to the establishment. The upper portion of the hut was appropriated to the use of the family. In the centre of this upper division was placed the fire, the smoke from which was made to circulate throughout the whole hut for the purpose of conveying heat into its furthest extremities — the effect being to cover everything with a black, glossy soot, and to produce the most evident injury to the appearance and eyesight of those most exposed to its influence. The floor was the bare earth, except near the fire-place, where it was rudely paved with rough stones. It was never levelled with much care, and it soon wore into every sort of inequality, according to the hardness of the respective soils of which it is composed. Every hollow formed a receptacle for whatever fluid happened to fall near it, where it remained until absorbed by the earth. It was impossible that it should ever be swept; and when the accumulation of filth rendered the place uninhabitable, another hut was erected in the vicinity of the old one. The old rafters were used in the construction of the new cottage, and that which was abandoned formed a valuable collection of manure for the next crop. The introduction of the potato in the first instance proved no blessing to Sutherland, but only increased the state of wretchedness, inasmuch as its cultivation required less labour, and it was the means of supporting a denser population. The cultivation of this root was eagerly adopted; but being planted in places where man never would have fixed his habitation but for the adventitious circumstances already mentioned, this delicate vegetable was of course exposed to the inclemency of a climate for which it was not suited, and fell a more ready and frequent victim to the mildews and the early frosts of the mountains, which frequently occur in August, than did the oats and bere. This was particularly the case along the courses of the rivers, near which it was generally planted, on account of the superior depth of soil. The failure of such a crop brought accumulated evils upon the poor people in a year of scarcity, and also made such calamities more frequent; for in the same proportion as it gave sustenance to a larger number of inhabitants when the crop was good, so did it dash into misery, in years when it failed, a larger number of helpless and suffering objects. As often as this melancholy state of matters arose—and, upon an average, it occurred every third or fourth year, to a greater or less degree—the starving population of the estate became necessarily dependent for their support on the bounty of the landlord. . . . The cattle which they reared on the mountains, and on the sale of which they depended for the payment of their rents, were of the poorest description. During summer they procured a scanty sustenance, with much toil and labour, by roaming over the mountains; while in winter they died in numbers for the want of support, notwithstanding a practice which was universally adopted of killing every second calf on account of the want of winter keep. To such an extent did this calamity at times amount, that in the spring of 1807 there died, in the parish of Kildonan alone, 200 cows, 500 head of cattle, and more than 200 small horses.'

In consequence of the constant recurrence of such famine periods, when these small tenants and their families thus became, in consequence of the loss of cattle and sheep and the failure of their crops, absolutely dependent on others for support, 'it was thought desirable that some change should be made in the condition of the people, both for their own interests and with the view of properly developing the resources of the county. The subject was remitted by Lord Stafford, the first Duke of Sutherland, to eminent agriculturists, who reported in effect, "that the mountainous parts of the

estate—and, indeed, of the county of Sutherland—were as much calculated for the maintenance of stock as they were unfit for the habitation of man;" and that it seemed "as if it had been pointed out by Nature that the system for this remote district, in order that it might bear its suitable importance in contributing its share to the general stock of the country, was to convert the mountainous districts into sheep-walks, and to remove the inhabitants to the coast, or to the valleys near the sea." The movements thus indicated were carried into effect between 1810 and 1820, the great bulk of the small tenants and their families having been settled near the coast, where a limited piece of land was allotted to each at a merely nominal rent. It is stated, also, that a few who preferred that step, were conveyed to Canada at Lord Stafford's expense; but it is denied that the population of the county was reduced to any appreciable extent by emigration due to these clearances;' and that this is true is clear from the census returns, which show a continuous though small increase from 1801 to 1831. The decrease since that time has probably been brought about more by the tendency of labourers to pass south to places where wages are higher, than by emigration, compulsory or otherwise; and a recent observer, who had good opportunity of studying the subject, thinks that the smaller tenants are 'better educated, better fed, and better clothed, as well as better housed, than when they were scattered along the straths in the interior.' The dirty old turf houses have now almost entirely disappeared, though much might still be done for the improvement of the crofter's habitation.

The increase in the amount of the arable land in the county since the beginning of the present century has probably been over 21,000 acres, the estimated area in 1808 having been 18,125 acres, while now it is 39,996. Of this increase 10,000 acres have been added since 1879, but a considerably larger proportion of land is now allowed to lie fallow. In consequence of the large sums spent by the people on the Sutherland estates in the purchase of oatmeal and turnips from districts outside the county, the Duke of Sutherland determined in 1870 to try to increase the arable area on his estate, and requested the late well-known agriculturist, Mr Kenneth Murray of GEANIES, to make a careful survey of such portions of the property as seemed most suitable for reclamation. On his recommendation large tracts were cleared and reclaimed between 1873 and 1878 at LAIRG and KILDONAN at very great expense. The ground was deep-drained and deeply ploughed and trenched by means of large ploughs and other implements—many of them specially designed for the purpose—all worked by steam. The operations attracted a great amount of notice at the time, and during their progress the place was visited by a deputation of the members of the Highland and Agricultural Society in 1874 and by the Prince of Wales in 1876. In many cases the process involved the creation rather than the improvement of the soil, and was carried out, in the earlier cases at all events, at an outlay that only a very wealthy proprietor with other sources of income than these northern estates could venture to incur. In fact the expenditure on the Sutherland estates between 1853 and 1882 exceeded the income derived from them by £245,374, exclusive of the household maintenance. Of the total expenditure the sum of £254,900 was on reclamation, £226,300 on railways, and £47,516 on the works at Brora. The percentage of cultivated to whole area (2·9) is the lowest in Scotland. The areas under the various crops in different years are given in the following tables:—

GRAIN CROPS.—ACRES.

Year.	Wheat.	Barley or Bere.	Oats.	Total.
1853	217	3643	6569	10,529
1870	246	2060	6181	8,644
1879	27	2268	7809	10,235
1884	..	2068	8277	10,423

GRASS, ROOT CROPS, ETC.—ACRES.

Year.	Hay and Grass in Rotation.	Permanent Pasture.	Turnips.	Potatoes.
1853	4977	1818	2091	2507
1870	5887	4198	2506	1748
1879	7617	6102	3232	1929
1884	7183	9332	3076	2152

while there are on an average about 120 acres under other grain crops, and about 50 under other green crops. The fallow used to average about 150 acres, but last year it reached the large total of 7764 acres. The chief increase, as is seen from the tables, is in oats and pasture. Wheat has fallen off rapidly since 1870, principally in consequence of the wet seasons. The returns are average, but oats give a large yield, and the grain is of good quality, the soil and climate being admirably suited for this crop.

The live stock in the county at different dates is shown in the following table:—

Year.	Cattle.	Horses.	Sheep.	Pigs.	Total.
1853	12,592	2794	168,170	1310	184,866
1870	10,367	2511	216,561	1378	230,817
1879	12,343	2629	209,413	1157	225,542
1884	12,186	2605	218,852	1213	234,856

Cattle rearing is not carried on to any great extent. The old small black cattle are now gone, and there place has been taken by West Highland, polled, shorthorn, and cross-bred animals. The horses on the large farms are Clydesdales, but on the smaller farms they are lighter, though compact, well-shaped, and active; and many of the crofters have ponies. In the beginning of the present century the sheep were mostly of the old small Kerry breed, but in 1806-7 these nearly all died from disease, and in the latter year two Northumbrian sheep-farmers took a grazing farm in the centre of the county about Beinn Cleith Bric and Beinn an Armuinn and introduced Cheviots, which remain the principal breed in the county. An attempt was once made to introduce merino sheep, but it did not succeed. The rents of sheep farms vary from 4s. to 7s. a head. Over 92 per cent. of the holdings are under 20 acres, and over 68 per cent. under 5 acres, and of the remainder the greater portion are under 100 acres, but some of the sheep farms are of very large size. No county has such a large percentage of holdings under 20 acres, a fact which affords a strong presumption that the complaint about the consolidation of small holdings can hardly be true in regard to this county, though it is sometimes instanced as a typical case. Of 2589 holdings, 2505 are of 50 acres or less; 29 of between 50 and 100; 42 of from 100 to 300; 9 of from 300 to 500; and 4 of above 500. The woodland has been largely increased since 1872.

Industries, Communications, etc.—The county can hardly be said to have any industries except those already described under BRORA, but there is a well-known distillery at Clyneleish; and sandstone of fine white colour and good texture is quarried at Clyne. Cotton manufacture was at one time tried in the SE, but it failed, and the spinning of linen yarn from flax imported from the Baltic, in which there was once a trade worth £3000 a year, was ruined by Buonaparte's continental system. Woollen stuffs were at one time manufactured for local supply, but the industry is gone, and a proposal made some years ago by the Duke of Sutherland to establish a woollen mill at Brora has not been carried out. The manufacture of kelp, at one time extensive, was ruined here as elsewhere by the removal of the duty on barilla. HELMSDALE is one of the chief herring-fishing stations on the Moray Firth, and the salmon fishing in many of the rivers is of value and importance. There is good fishing ground off the N coast, but the difficulty of getting the fish to market prevents its being taken advantage of. In the begin-

ning of the present century, the county was without formed roads, but in 1811, under the Highland Road Act of 1803, the Parliamentary Commissioners completed the formation of a road along the E coast and through the centre, the former leading over the Ord into Caithness, and the latter to Tongue. There are now also good main lines of road from N to S by Strath Halladale and Strath Ullie, by Strath Naver and Bagaisteach to Lairg, by Strath More and Bagaisteach from Eriboll to Lairg; and from Lairg to the W coast by the hollow of Loch Shin, Loch Merkland, Loch More, and Loch Stack to Laxford, and thence to Rhiconich, Durness, and Cape Wrath; and there are also a number of good cross and district roads in the SE. The HIGHLAND RAILWAY enters the county at Invershin, runs up the hollow of the Shin to Lairg station, turns down Strath Fleet, skirts the coast from Golspie to Helmsdale, and then turns up Strath Ullie to Forsinard, where it passes into Caithness.

The county town and only royal burgh is Dornoch; towns with more than 1000 inhabitants are Golspie, Helmsdale, and the combined Portskerra and Melvich; and smaller villages are Armadale, Backies, Bonar-Bridge, Brora, Clashnessie, Durness, Embo, Farr, Inver, Kinlochbervie, Kirkiboll, Lairg, Melness, Melvich, Port Gower, Scourie, Skianid, Strathy, Tongue, Torrisdale, and West Helmsdale. The chief residences are Dunrobin Castle, Achany, Balnakiel, Creich House, Culgower, Dornoch House, Embo, Eriboll House, Inverbrora, Kirtomy, Ospisdale, Rhives, Rosehall, Scourie House, Tongue House. The principal proprietor is the Duke of Sutherland, who holds 1,176,343 acres; E. C. Sutherland-Walker, Esq. of Skibo, has about 20,000; Lady Matheson of Lewis and Achany, 18,490; and the remainder is divided among 430 proprietors, of whom only 8 have over 1000 acres.

The cival county comprehends the thirteen entire *quoad civilia* parishes of Assynt, Clyne, Creich, Dornoch, Durness, Eddrachillis, Farr, Golspie, Kildonan, Lairg, Loth, Rogart, and Tongue, and part of the parish of Reay shared with Caithness. The *quoad sacra* parishes of Stoer, Kinlochbervie, and Strathy are also included. Except Reay, which is in the presbytery of Caithness, they are all included in the presbyteries of DORNOCH and TONGUE. Service is conducted in Gaelic in all the churches, of which there are in the county 16 in connection with the Established Church, and 18 in connection with the Free Church. In the year ending September 1883, there were in the county 40 schools (37 public), which, with accommodation for 3856 pupils, had 2550 on the rolls, and an average attendance of 1816. Their staff consisted of 45 certificated, 4 assistant, and 5 pupil, teachers. Sutherlandshire, with a parliamentary constituency of 374 in 1885, returns a member to serve in parliament, and Dornoch being included in the Wick burghs, has a share of another. It is governed by a lord lieutenant and high sheriff, a vice-lieutenant, 8 deputy lieutenants, and 43 justices of the peace. It forms a division of the sheriffdom of Ross, Cromarty, and Sutherland, with a resident sheriff-substitute at Dornoch. Ordinary and small debt sheriff courts are held at Dornoch every Tuesday and Friday during session, and small debt circuit courts are held in May, July or August, and September or October at Helmsdale for the parishes of Loth, Clyne, and Kildonan; at Tongue for the parishes of Tongue and Durness; at Melvich for the parishes of Farr and Reay; and at Scourie in May only, for the parishes of Assynt, Eddrachillis, and Durness. Justice of peace courts are held at Dornoch on the first Tuesday of every month; at Golspie on the second Tuesdays of February, April, June, and October; at Brora on the Wednesdays after these Tuesdays; and at Helmsdale on the Thursdays after. The police force consists of 13 men (1 to every 1797 of the population), under a chief constable with a salary of £255 a year. The number of cases dealt with is about 80 every year. The prison at Dornoch was discontinued in 1880. The average number of registered poor in 1883 was 744, with 223 dependants, and of casual poor 13, with 9 dependants. All the parishes are assessed, and they unite to form a poor-law combination with a poorhouse at Bonar-Bridge. The proportion of illegitimate births averages about 6·3 per cent., and the death-rate is about 16·2. Markets are held at Dornoch, Alltnaharrow, Brora, Clashmore, Farr, Golspie, Helmsdale, Inchnadamff, and Kyle of Sutherland. There are artillery and rifle volunteers connected with the county. Valuation (1674) £2266, (1815) £33,878, (1860) £52,379, (1870) £62,629, (1880) £96,273, (1885) £99,124, inclusive of railway. Pop. of registration county, which gives off part of Reay to Caithness, (1871) 22,298, (1881) 22,376; of civil county (1801) 23,117, (1811) 23,629, (1821) 23,840, (1831) 25,518, (1841) 24,782, (1851) 25,793, (1861) 25,246, (1871) 24,317, (1881) 23,370, of whom 11,219 were males and 12,151 were females. These were distributed into 5220 families occupying 4840 houses, with 17,242 rooms, an average of 1·35 persons to each room. Of the 23,370 inhabitants, 397 males and 150 females were connected with the civil or military services or with professions, 153 men and 830 women were domestic servants, 264 men were connected with commerce, 4262 men and 1540 women were connected with agriculture and fishing, and 1940 men and 224 women were engaged in industrial occupations. Of those engaged in agriculture and fishing 3031 men and 1430 women were employed in farming alone, while there were 3502 boys and 3238 girls of school age.

The territory now forming the county of Sutherland was held by the Scandinavians along with Caithness, but not so firmly nor so long, one result being that far more Celtic place-names have survived in Sutherland. The antiquities—the most important of which are the numerous Pictish towers or brochs—and also the events of historical importance, will be found noticed in connection with the parishes. After the North passed finally into the hands of the Scottish kings, the district became a thanedom, and was granted in the end of the 12th century to Hugh Freskin, son of that Freskin de Moravia who had obtained a grant of the lands of Duffus from King David I. Hugh's son William was created EARL of SUTHERLAND by King Alexander II. about 1228, and the title descended in the direct male line till the death of John, the ninth earl, in 1514. He was succeeded by his sister, who was married to the second son of the Earl of Huntly, and her husband, becoming Earl of Sutherland in right of his wife, was the founder of a new line of earls who were Gordons. In 1766 this line again ended in an heiress, who in 1785 married George Granville Leveson-Gower, second Marquess of Stafford, who was created Duke of Sutherland in 1833. The Duchess-Countess, who died in 1839, was succeeded by her son, who died in 1861. He was succeeded by his son, the present Duke (b. 1828). The seats are DUNROBIN Castle and Tongue House.

See James Macdonald, 'On the Agriculture of Sutherland,' in *Trans. Highl. and Ag. Soc.* (1880); C. W. G. Saint John, *A Tour in Sutherlandshire* (2 vols. 1849); Sir Robert Gordon, *Genealogical History of the Earldom of Sutherland* (1813); and A. Young, *Angler's and Sketcher's Guide to Sutherland* (1880).

Sutherland and Caithness, a synod of the Established Church, comprehending the presbyteries of DORNOCH, TONGUE, and CAITHNESS. It meets at Dornoch on the last Wednesday of August. The Free Church has also a synod of Sutherland and Caithness, embracing the same districts and presbyteries, and meeting at Helmsdale or Lairg on the second Wednesday of April.

Sutherland and Caithness Railway. See HIGHLAND RAILWAY.

Sutors of Cromarty. See CROMARTY.

Swana. See SWONA.

Sweatheart Abbey. See NEWABBEY.

Sweno's Stone. See FORRES.

Swindridgemuir, a plain two-story mansion in Dalry parish, Ayrshire, 2 miles ENE of the town. It was built about 1830 by Jn. Smith, Esq. (1754-1838), whose great-grandfather had acquired the estate about the

year 1700, and whose great-nephew was Brigadier-General Jas. Geo. Smith-Neill (1810-57), a hero of the Indian Mutiny. (See AYR.) *His* son, Wm. Jas. Smith-Neill, Esq. (b. 1837), holds 1275 acres in the shire, valued at £3743 per annum.—*Ord. Sur.*, sh. 22, 1865. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Swiney House, a mansion in Latheron parish, Caithness, 1½ mile WSW of Lybster.

Swin, Loch, an inlet of the sea, on the coast of Argyllshire, opposite the island of Jura, 9½ miles long, and from 5 furlongs to 2 miles broad. It runs up north-north-eastward, in a line slightly divergent from that of the coast, so as to enclose a long and very slender peninsula; and it flings out several long, narrow arms, in lines nearly parallel to its own direction, so as to peninsulate various belts of hill-ground on its coasts. At its entrance lies a cluster of islets, on one of which are well-preserved remains of an ancient chapel and vaulted cell, with an elegant and curiously sculptured sarcophagus. A series of abrupt and lofty hills encompasses the loch; and they terminate in rocky and deeply indented shores, and, over much of their declivity, are richly wooded. The scenery is striking and full of character. On the E shore, 2 miles from the entrance, stand the fine ruins of CASTLE-SWIN.

Swinna. See SWONA.

Swinton, a village and a parish in the Merse district, SE Berwickshire. The village stands, 190 feet above sea-level, near the left bank of Leet Water, 6⅛ miles N by W of Coldstream and 5½ SE by S of Duns, under which it has a post office, with money order and savings' bank departments. Built round a large green, whereon stands an ancient cross, it presents a pleasant appearance, and has an inn and several shops; but its two fairs, on the third Thursday of June and the fourth Tuesday of Oct., have long been obsolete. Pop. of village (1831) 450, (1861) 431, (1871) 456, (1881) 434.

The parish, since 1761 comprehending the ancient parish of Simprin, is bounded N by Edrom and Whitsome, E and SE by Ladykirk, S by Coldstream, W by Eccles, and NW by Fogo. Its utmost length, from E to W, is 4 miles; its utmost width is 3 miles; and its area is 5571⅜ acres, of which 11 are water. LEET WATER, entering from Whitsome, flows 3½ miles south-westward through the interior, and 5½ furlongs south-by-westward along the Eccles border, till it passes off on its way to the Tweed at Coldstream. The surface is a series of gentle ridgy elevations, ranging from E to W, with intervening flats, and, at no point sinking much below 170, at none exceeds 274, feet above sea-level. New Red Sandstone is the predominant rock, and has been largely quarried. The soil in general is clayey, deep, and fertile. Nearly all the land, except some 25 acres under wood, is regularly or occasionally in tillage. From time immemorial the lands of Swinton have been held by the Swinton family; Edulf de Swinton having received from Malcolm Ceannmor (1058-93) a charter—one of the earliest granted in Scotland—confirming to him the entire parish of Swinton. Among his descendants were Sir John Swinton, to whom Fordun ascribes the victory of Otterburn (1388), and who fell fighting bravely at Homildon Hill (1402); Sir John, his son, who unhorsed and slew the Duke of Clarence, Henry V.'s brother, at the battle of Beaugé (1421), and himself fell at Verneuil (1424); Alexander, the 'fanatic judge,' Lord Mersington, who headed the riotous attack on the Chapel Royal of Holyrood (1688); and John, likewise a lord of session by the title of Lord Swinton, who died in 1799. The estate is now held by Mrs Swinton, who owns 1161 acres in the shire, valued at £2808 per annum. Her seat, Swinton House, 1⅜ mile WSW of the village, is an elegant modern mansion, successor to one of great antiquity. An interesting history of the Swinton family was privately printed in 1883. Simprin was long the property of the Cockburns of Langton, who sold it in 1758. In all, 5 landowners hold each an annual value of £500 and upwards. Swinton is in the presbytery of Chirnside and the synod of Merse and Teviotdale; the living is worth £511. Thomas Boston (1676-1732), author of the *Fourfold State*, was minister of Simprin from 1699 until his translation to Ettrick in 1707. The session register during these eight years is wholly in his handwriting, and is still preserved; but the little church, near the southern border of the united parish, has long since fallen to decay. Swinton parish church, at the village, was built in 1729, and, as enlarged by an aisle in 1782, contains 366 sittings. A beautiful Free church (1860) contains 550 sittings; and a handsome public school, erected in 1877 at a cost of £2000, with accommodation for 200 children, had (1884) an average attendance of 150, and a grant of £126, 17s. Valuation (1865) £10,993, 9s. 7d., (1885) £10,529, 5s. 8d. Pop. (1801) 875, (1841) 1095, (1861) 964, (1871) 996, (1881) 964.—*Ord. Sur.*, sh. 26, 1864.

Swinton, a village in Old Monkland parish, Lanarkshire, ½ mile N of Baillieston, and 6 miles E of Glasgow. Pop. (1861) 386, (1871) 346, (1881) 619.

Swinton Bank, a mansion in Peebles parish, Peeblesshire, 1 mile N of the town.

Swona, an island of South Ronaldshay parish, Orkney, at the entrance of Scapa-Flow from the Pentland Firth, 2¼ miles W by S of Barth Head in South Ronaldshay island, and 3¾ miles SE of Cantick Head in Walls. It measures 1½ mile in length, and 3½ furlongs in extreme breadth; is strongly swept by the tidal currents of the Pentland Firth; and gives the name of Wells of Swona to whirlpools in its vicinity. Pop. (1861) 46, (1871) 47, (1881) 47.

Swordle, a village in Stornoway parish, Outer Hebrides, Ross-shire, adjacent to Knock village, and 6 miles ESE of the town of Stornoway. Pop., with Knock, (1871) 408, (1881) 496.

Sydenham, a mansion in Kelso parish, Roxburghshire, 2 miles N of the town. Its owner, Sir John-Poynder Dickson-Poynder, sixth Bart. since 1802 (b. 1866; suc. 1884), holds 234 acres in the shire, valued at £754 per annum.—*Ord. Sur.*, sh. 25, 1865.

Symington, a village and a parish in the NW of Kyle district, Ayrshire. The village stands 3½ miles NNE of Monkton station, and 6 SSW of Kilmarnock, under which it has a post office.

The parish is bounded NE by Riccarton, E by Craigie, S and SW by Monkton, and W and NW by Dundonald. Its utmost length, from NNE to SSW, is 4⅜ miles; its breadth varies between 1 and 2¼ miles; and its area is 3736½ acres, of which 11½ are water. In the extreme S the surface declines to close on 100 feet above sea-level; and thence it rises gently to a maximum altitude of 333 feet at a point 2⅛ furlongs NNE of the church, from which it sinks again to 201 feet near the Riccarton border. It thus exhibits a pleasing diversity of swells and slopes, and contains many vantage grounds commanding extensive views of great part of Ayrshire, the Firth of Clyde, and the Isle of Arran. Trap rock has been quarried for road metal, and sandstone for building; whilst limestone and coal exist, but not under profitable conditions. The soil, in general, is of a clayey character, on a hard subsoil. Nearly all the land, except about 300 acres under wood, is regularly or occasionally in tillage. The principal residences are Coodham, Dankeith, Rosemount, and Townend; and 5 proprietors hold each an annual value of £500 and upwards, 5 of between £100 and £500. Symington is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £350. The parish church is an old building with Norman features, and, as entirely remodelled in 1880, contains 359 sittings. There is also a Free church; and the public school, with accommodation for 132 children, had (1884) an average attendance of 85, and a grant of £69, 16s. Valuation (1860) £6560, (1885) £7104, 5s. 3d. Pop. (1801) 668, (1841) 918, (1861) 855, (1871) 792, (1881) 697.—*Ord. Sur.*, shs. 22, 14, 1865-63.

Symington, a small Clydesdale parish in the Upper Ward of Lanarkshire, containing, at its NW border, Symington Junction on the Caledonian railway, 6¾ miles SSE of Carstairs, 19 W by S of Peebles, and 3¼ WSW of Biggar, under which there is a post office.

It is bounded NW by Covington, N by Libberton and Biggar, E by Culter, SE by Lamington, and SW by Wiston. Its utmost length, from ENE to WSW, is 4⅜ miles; its utmost breadth is 2⅛ miles; and its area is 5⅝ square miles or 3549¼ acres, of which 46 are water. The CLYDE winds 6½ miles north-north-eastward and north-westward along or close to all the Lamington, Culter, Biggar, and Libberton boundary, though the point where it first touches and that where it quits the parish are only 3½ miles distant as the crow flies; and two little affluents of the Clyde, Lanimer and Kirk Burns, trace most of the south-western and north-western boundaries. In the N, beside the Clyde, the surface declines to close on 650 feet above sea-level; and thence it rises to 754 feet near Annieston, 854 at the Castle Hill, 1261 at Wee Hill, 1925 at Scaut Hill, and 2335 at TINTO, which culminates just on the meeting-point of Symington, Wiston, Carmichael, and Covington parishes. The rocks are variously Devonian, Silurian, and eruptive; and the soil ranges from fertile alluvium on the level lands fringing the Clyde to moorish earth on the hills. According to Ordnance Survey, 2274 acres are arable, 193 under wood, 674 moorland, and 249 rough pasture. FATLIPS CASTLE, the chief antiquity, is noticed separately; on the Castle Hill, ½ mile SW of the village, are vestiges of an earthwork rampart; and at Annieston is a ruinous tower. The parish derived its name from Symon Loccard, progenitor of the Lockharts of Lee, who appears to have founded its church between 1153 and 1165; and from early in the 14th, till towards the middle of the 17th, century, the barony was held by Symingtons of that ilk. Now there are 4 proprietors owning each an annual value of more than £500, and 2 of between £100 and £500. Symington is in the presbytery of Biggar and the synod of Lothian and Tweeddale; the living is worth £194. The parish church, near Symington village, ¾ mile SE of the station, is an old building, repeatedly repaired, and containing 200 sittings. The public school, with accommodation for 72 children, had (1884) an average attendance of 76, and a grant of £71, 8s. Valuation (1860) £4879, (1885) £6558, 9s. Pop. (1801) 308, (1831) 489, (1861) 528, (1871) 442, (1881) 462.—*Ord. Sur.*, shs. 23, 24, 1865-64.

Symington House, a modern mansion in Stow parish, Edinburghshire, on the W side of Gala Water, 3¼ miles NNW of Stow village.

Synniness, a ruined castle near the coast of Old Luce parish, Wigtownshire, 3 miles SSE of Glenluce. It was built by Archibald Kennedy towards the close of the 16th century.

Syster, Loch. See DUNNET.

T

TAARNER, a triangular islet (½ × ¼ mile; 218 feet high) of Bracadale parish, Isle of Skye, Inverness-shire, in Loch Bracadale, 5 furlongs from the shore.

Tain (Scand. *Thing*, 'a place of assembly'), a town and a parish of NE Ross and Cromarty. A royal, parliamentary, and police burgh, the town stands 3 furlongs from the southern shore of the Dornoch Firth, and has a station on the Highland railway (1864), 25¾ miles NE of Dingwall and 44 NNE of Inverness. Extending ½ mile north-westward along the ancient sea-margin of the firth, it has pleasant environs of hill and brae, terrace and down; and, though irregularly aligned, has undergone such improvement of recent years as to contain a number of good modern houses, and to present a remarkably tidy appearance. The Gaelic name of Tain is *Baile Dhuthaich*, or 'Duthus' town,' after St Duthus or Duthac, a famous Saint styled 'Confessor of Ireland and Scotland,' and supposed (probably erroneously) to have been Bishop of Ross, who was born at the site of St Duthus' Chapel, Tain, about the year 1000, and died in 1065 at Armagh in Ireland, whence his body was 'translated' to Tain for burial in 1253. A rude granite chapel 'quhair he was borne,' now roofless and partly broken down, bears his name, and was of old a famous 'girth' or sanctuary. Hither, in 1306, Isabella, Queen of Robert the Bruce, his daughter Marjory, and ladies of his court with attendant knights, fled for safety from Kildrummy Castle, but were seized at the chapel by the Earl of Ross, and delivered by him to Edward I. of England, who imprisoned the ladies and executed their male attendants. Hither, also, in 1427, M'Neill of Creich (Sutherland), a barbarous chief, pursued Mowat of Freswick (Caithness), and burned the chapel over him and his followers, who had taken refuge in it. It was probably on that occasion that the earlier charters of the burgh had been burnt 'by certain savages and rebellious subjects,' as stated in a charter of Novodamus, granted by James VI. in 1587. It is probable that several of the earliest Scottish monarchs visited the shrine of St Duthus; and after the death of James III., an annual sum was paid to its chaplain from the royal treasury to say masses for the King's soul. But it is certain (from entries of disbursements in the King's Treasurer's books) that James IV. visited it regularly every year, probably without the omission of one, during at least 20 successive years from 1493 to 1513, to do penance for the part which he took in reference to his father's death. His last visit was made early in August 1513, and on 9th September of the same year he was killed on the fatal field of Flodden. Again, in 1527 James V. made a pilgrimage barefooted to it at the instigation of his popish advisers, who wished to get him out of the way when they were about to condemn and burn for heresy his near relative Patrick Hamilton, the first martyr of the Scottish Reformation. A rough foot-path across the moor in the uplands of the parish is traditionally pointed out as the hastily-constructed route by which he approached, and still bears the name of the King's Causeway. The grounds around the chapel have been recently enclosed by a handsome parapet wall and railing, and formed into a very pretty cemetery. The collegiate church of St Duthus, in the Decorated English Gothic style, was founded in 1471 by Thomas Hay, Bishop of Ross, for a provost, eleven prebendaries, two deacons, a clerk, and three singing-boys. From the Reformation till 1815, it was used as the parish church, but being too small to contain the parishioners, it was, in that year, relinquished for the present large parish church, and thereafter was allowed to fall into great decay by neglect. At the instance of the late Provost M'Leod and his son, A. B. M'Queen M'Intosh, Esq. of Hardington (son of Rev. Dr Angus M'Intosh, during whose ministry the church was vacated), Kenneth Murray, Esq. of Geanies, Provost Vass, and others, the church was completely restored between 1849 and 1882 at a cost of about £1110; and, set apart for monumental and memorial purposes—the Valhalla of Ross-shire—it has been entrusted to the 'Tain Guildry Trust,' for care and preservation. It may be remarked that its fine old oak pulpit was a gift from the 'good Regent' Murray to Tain for its zeal in the Reformation. The church stands beautifully on the N side of the town on a wooded knoll, by whose trees it is embosomed. All its five principal windows are filled in with stained-glass designs. The five-light E window is on a grand scale, and is the gift of Mr A. B. M'Queen M'Intosh, in memory of his father, Rev. Dr Angus M'Intosh, and his brother, Rev. Dr C. C. M'Intosh, ministers of Tain; and the four-light W window, representing the adoption of the Confession of Faith by the Scottish Parliament in 1560, is the gift of Mr George M'Leod, in memory of his

father, Provost M'Leod. A third window represents Malcolm Ceannmor with his good Queen Margaret, handing the burgh's first charter to the provost and magistrates. Underneath the E window there is a most beautiful double pannelled monument 16 feet long by 7½ high, in the Gothic style of the 16th century which is of Scottish national interest. It commemorates Patrick Hamilton — of royal extraction—the youthful Abbot of Fearn, who was burned at the stake at St Andrews, 28 February 1528, the first martyr of the Reformation; and Thomas Hog, the Covenanting minister of Kiltearn, one of Tain's most honoured sons, and the intimate friend and adviser in Scottish affairs of William III., Prince of Orange. Opening into the churchyard in which the church stands, a very handsome ornamental gate has been erected (1885) in memory of the late William Ross, bank agent, Tain.

A court house, erected in 1825, was burned to the ground in 1833, when three lives were lost; but in 1849 it was succeeded by a handsome pinnacled edifice in the Scottish Baronial style, which, with additions made in 1873, cost about £3000. Immediately adjoining it is an ancient square tower, formerly the prison, which is a fine massive erection with a completely foreign air, and which has been utilised to form a handsome entrance to the court house. It has a central conical spire, and a smaller one at each angle. It has also a fine weathercock, and a sweet-toned bell, founded in Holland in 1616. In 1706 the General Assembly of the Church of Scotland ordered a collection to be made over the whole church for the building (repairing?) of 'the Tolbooth of Tain,' but with what result, and whether it was for this Prison Tower, is unknown (*Church of Scotland Magazine*, 1834). A market-cross formerly stood in front of the tower, and was surmounted by a lion rampant, the crest of the Earls of Ross. A public hall, French Renaissance in style, was erected in 1875-76 at a cost of £2500, and contains accommodation for nearly 600 people. In 1879 a very handsome monument, 44 feet high, in the Decorated Gothic style, by Mr Laurence Beveridge, of Edinburgh, was erected at a cost of £700 to the memory of the late Kenneth Murray, Esq. of Geanies, of whom there is a fine marble bust by Mr T. S. Burnett, Edinburgh, under its central arch. The present parish church, built in 1815, is a square battlemented structure, with 1200 sittings and a heavy tower at each of the four angles. Other places of worship are a Free church (1844; 1200 sittings), a U.P. church (entirely remodelled in 1879; 350 sittings), and an iron Episcopal church (1878; 84 sittings). The Academy, constituted by royal charter in 1809, and built by subscription in 1812, is a handsome and spacious edifice, pleasantly situated in a park of nearly 3 acres at the W end of the town. It is conducted by mathematical, classical, and English masters, and a female teacher of music and drawing; is attended by 175 scholars; and has a yearly endowment of upwards of £300. A university bursary, with a capital fund of £930, was founded in connection with it in 1879, in memory of Kenneth Murray, Esq. of Geanies. The Easter Ross Poorhouse, 7 furlongs SSW of the town, is a high-roofed building, erected in 1848, and having accommodation for 176 paupers. Tain has besides a post office, with money order, savings' bank, and telegraph departments, branches of the Bank of Scotland, the Commercial, British Linen Co., and North of Scotland Banks, 14 insurance agencies, a gas company, 3 hotels, a mechanics' institution, a farmers' club, a curling club, a volunteer corps, 2 masonic lodges, a fortnightly Friday grain market, and fairs on the first Tuesday of January (Cormack's Fair), the third Tuesday of March, the Wednesday after the second Tuesday of July, the Wednesday after the third Tuesday of August, the third Tuesday of October, and the Tuesday before Christmas. In the neighbourhood are Glenmorangie Distillery and Hilton Woollen Mills, the former 1⅝ mile NW, the latter 1¼ mile SE, of the town. Tain has a most spacious links, affording great scope for recreation. Near its centre is the 'Gallows Hill' (the magistrates in ancient times had the power of 'pit and gallows'); and at its S end is a large skating-pond, formed in 1882. As the sea had, during the last century, been making rapid and severe inroads upon it, it has been protected by a strong rough bulwark of boulder stones. In the neighbourhood of the links, and near the railway station, have been erected (about 1878) a large wood and meal mill; an extensive store house for corn, coals, manures, etc. (1885), at a cost of £1400; and a public shambles (1885), in the Lombardic style, at a cost of £800. A most copious supply of excellent spring water was introduced to the town in 1871 from a distance of 4 miles, at a cost of £4200; and £2000 was expended in 1877-84 in a system of thorough drainage over and above previous outlay for this purpose; so that the town is now one of the healthiest in the kingdom.

Tain is said to have been created a royal burgh by Malcolm Ceannmor about the year 1057, but its earliest extant charter was granted by James VI. in 1587, and was ratified and extended by others of 1612 and 1671-72. In 1863 it adopted the General Police and Improvement Act (Scot.) of 1862, and is governed by a provost, 3 bailies, a dean of guild, a treasurer, and 9 councillors. With the five other WICK burghs it returns a member to parliament. A district sheriff court sits every Wednesday during session. Corporation revenue (1833) £314, (1865) £1131, (1884) £1024. Valuation (1864) £4055, (1885) £5983. Parliamentary constituency (1885) 237; municipal, 282. Pop. of royal burgh (1841) 2287, (1861) 2319, (1881) 2221; of parliamentary and police burgh (1841) 1867, (1861) 1779, (1871) 1765, (1881) 1742, of whom 972 were females. Houses in parliamentary burgh (1881) 343 inhabited and 10 vacant.

Seal of Tain.

The parish, containing also most of INVER village, 6¼ miles E by N of Tain, is bounded N by the Dornoch Firth, E (for 3 furlongs only) by Tarbat, SE by Fearn, S by Logie-Easter, and W by Edderton. Its utmost length, from E to W, is 8¼ miles; its utmost breadth is 4⅜ miles; and its area is 33¾ square miles, or 21,606¼ acres, of which 3706⅜ belong to Cromartyshire, and 269⅛ are water, 4639 foreshore, and 30⅝ tidal water. The coast, from end to end of the parish, has nearly the figure of a crescent, and encloses the Bay of Tain. In general low and flat, nowhere rising to a greater altitude than 30 feet; it is sandy, curved, and indented; and, suffering constant erosion from the sea, may be viewed as a broken sandbank. Along the skirt of its eastern half a tract of sand, 5 furlongs to 1¼ mile broad, is alternately dry and covered with the tide. Shoals and sunken banks obstruct the whole firth opposite the parish, and render navigation quite impracticable to strangers, and but limitedly practicable to the most skilful local pilots. The chief bank, or bar, called the Geyzen-Briggs, runs from coast to coast, with the exception of a narrow and difficult channel through its middle; and, whenever northerly or easterly winds blow, or sometimes even during a calm in frosty weather, it flings up a roaring and violent surge. Several banks in the middle of the firth, 2 miles above the Geyzen-Briggs, furnish large supplies of mussels, which are a principal source of revenue to the Burgh of Tain, and in 1783, during a great scarcity of food, yielded such immense quantities of mussels and cockles as, with some imported pease meal, contributed to the support of multitudes of human beings over the adjacent country. So comparatively recent has been the conquest of these banks and the adjacent sea-grounds from the solid territory both of

Tain and of the opposite coast, that, in the words of the *New Statistical Account*, 'although the firth now measures 3¾ miles across, there is an (improbable) tradition, that it was at one time possible to effect a passage over it at low water upon foot, by means of a plank thrown across the channel where narrowed to a few feet' by promontories which have been worn into the long sunken bank of the Geyzen-Briggs. Meikle Ferry, a narrow promontory, extending 1⅝ mile northwestward to within 5 furlongs of the opposite shore, is at the western extremity, and 4 miles distant from Tain. A small trouting stream, dignified with the name of the river Tain or Aldie Water, comes in from the SW, and makes a circuit round the burgh to the Firth. Springs of excellent water are numerous. Loch Eye (1¾ mile × 4½ furl.; 51 feet) lies on the Fearn boundary; and five smaller lagoons are scattered over the broad sandy golf-links of Morrich More, which skirt all the eastern seaboard. The surface of the parish consists of three well-defined districts—a belt of low flat plain along the coast, about ½ mile in mean breadth, and partly disposed in public links or downs; a broad sheet of land, of middle character between a terrace and a hanging plain, receding from a bank or escarpment of 50 feet above the plain, and displaying rich embellishments of wood and culture; and a ridge or series of gentle uplands along the exterior frontier, sending up their loftiest summit in the Hill of Tain to an altitude of 931 feet above sea-level. The soil is variously deep and light, fertile and barren; and the hills are partly heathy, partly clad with fir timber. The formation of the lowest grounds indicates an alternation of conquests and abandonments by the sea; that of the central district shows a prevalence of red clay with numerous boulders of granitic gneiss; and that of the hills is entirely sandstone—apparently the Old Red, though principally of whitish colour. The sandstone has been largely quarried in the Hill of Tain. Tarlogie House, 2 miles NW of Tain, was built in 1825 at a cost of £1750. Its owner, Major Hugh Law Rose (b. 1837; suc. 1867), is the largest proprietor in the parish with an annual rental of nearly £2000. Mr Macleod of Cadboll (residing at Invergordon Castle) has a rental of £1236 in the parish, and 2 lesser proprietors hold each an annual value of between £400 and £500, 11 of between £100 and £300. Tain is the seat of a presbytery in the synod of Ross; the living is worth £431. Two public schools, Inver and Tain, with respective accommodation for 70 and 323 children, had (1885) an average attendance of 59 and 208, and grants of £52, 6s. and £188, 17s. Valuation (1860) £7641, (1885) £6943, 12s. 10d., *plus* £1509 for railway. Pop. (1801) 2277, (1831) 3078, (1861) 3294, (1871) 3221, (1881) 3009, of whom 1016 were Gaelic-speaking.—*Ord. Sur.*, sh. 94, 1878.

The presbytery of Tain comprises the *quoad civilia* parishes of Edderton, Fearn, Kilmuir-Easter, Kincardine, Logie-Easter, Nigg, Rosskeen, Tain, and Tarbat, and the *quoad sacra* parish of Croick. The Free Church also has a presbytery of Tain, with churches at Edderton, Fearn, Invergordon, Kilmuir-Easter, Kincardine, Logie-Easter, Nigg, Rosskeen, Tain, and Tarbat, and a preaching station at Croick. See the *History of Tain* by the Rev. William Taylor, M.A. (Tain, 1882).

Talla Water, a troutful rivulet of Tweedsmuir parish, Peeblesshire, rising at an altitude of 2300 feet at a point ½ mile NW of Loch Skene, and running 6½ miles northwestward, till, after a descent of 1500 feet, it falls into the Tweed near Tweedsmuir church. See Gameshope Burn.—*Ord. Sur.*, sh. 16, 1864.

Tamsford or **Thomsford**, a hamlet in Largo parish, Fife, 2 miles NW of Lower Largo.

Tanera. See Summer Isles.

Tankerness Hall, a mansion in St Andrews parish, Orkney, on the northern shore of Deer Sound, 6 miles ESE of Kirkwall.

Tannach, a village in Wick parish, Caithness, 4 miles SW of Wick town.

Tannachy, an estate, with a mansion, in Rathven parish, Banffshire, 1 mile SSW of Port-Gordon.

Tannadice, a village and a parish of NW central Forfarshire. The village stands, 208 feet above sea-level, on the left bank of the river South Esk, 8¼ miles WSW of Brechin and 7 N by E of Forfar, under which it has a post office.

The parish is bounded N by Lethnot, E by Fearn and Careston, SE by Aberlemno, S by Oathlaw, SW by Kirriemuir, and W and NW by Cortachy. Its utmost length, from N to S, is 8⅝ miles; its breadth increases southward from 2¼ to 8 miles; and its area is 21,452⅝ acres, of which 124⅞ are water. Trusty Burn, rising at an altitude of 2160 feet in the NW corner of the parish, and running 3 miles south-south-eastward, unites, at 890 feet above sea-level, with another rivulet to form Noran Water, which itself flows 4¼ miles south-south-eastward through the interior and then 4½ miles east-south-eastward along the Fearn boundary, until it passes off from Tannadice at a point 1½ mile above its influx to the South Esk. That river has here an east-south-easterly course of 11 miles, viz., 6½ miles along the western and south-western border, next 3½ miles through the southern interior, then 5 furlongs along the Oathlaw boundary at Tannadice House, and lastly, a little lower down, ¾ mile along the same boundary at Marcus Lodge. The East Burn of Moye runs 5 miles south-south-westward along the north-western border to the South Esk, to which or to Noran Water flow several rivulets that rise in the interior. In the SE the surface declines to 140 feet above sea-level; and thence it rises to 415 feet at Meikle Coul, 889 near Newmill of Inshewan, 1611 at St Arnold's Seat, 1682 at Pinderachy on the Fearn boundary, and 2383 at the Hill of Glansie on the Lethnot boundary. The southern district is part of the rich and beautiful territory of Strathmore, but is more undulated and otherwise diversified than many other parts of the strath. The central and northern districts rise in hilly and undulating ridges to the lower acclivities of the Grampians; and St Arnold's Seat, a conspicuous hill in the van of the range, commands a gorgeous view of all Angus and Fife and most of the Lothians, away to the Pentlands and the Lammermuirs. The uplands are to a large extent heathy and almost wholly pastoral; and they maintain several hundreds of sheep. Only a few cattle are bred, a large number being bought in a fed condition every year. Except for a trap dyke extending across the entire breadth of the parish, Old Red Sandstone is everywhere the predominant rock. Of a coarse grain and a reddish hue, it is quarried chiefly for building fences. The soil is partly a fertile black loam, partly thin and of moorish texture. Within the last thirty-five years great improvements have been carried out in the way of draining, fencing, and building, especially on the Tannadice estate, which was purchased from Mrs Balfour Ogilvy in 1870 by William Neish, Esq. The mansion, Tannadice House, 7 furlongs ESE of the village, was built about 1805. Other mansions, noticed separately, are Downie Park, Glenogil, and Inshewan; and there are 14 estates, but only 12 proprietors. On the N side of the Esk, near Shielhill Bridge, anciently stood Quiech Castle, a seat of the Earls of Buchan. The site, now without a vestige of the castle, and occupied by a plain cottage, is a precipitous rock, looking sheer down, through deep and yawning chasms, upon a rush and turbulence of water, and almost isolated and rendered nearly inaccessible by the river. In the vicinity of Achlouchrie is the site of another ancient castle, an eminence which still bears the name of Castle Hill, and overhangs a deep gorge of the river, having round its base a semicircular fosse 12 feet deep and 30 wide. Three conical 'laws,' or ancient sepulchral tumuli, were levelled in the early part of the present century. Tannadice is in the presbytery of Forfar and the synod of Angus and Mearns; the living is worth £214. The parish church, at the village, is a Gothic edifice of 1846, containing 656 sittings. A Free church, Memus, stands 3⅝ miles W by N of the village and 5¼ NE of Kirriemuir. Three public schools—Burn-

side of Inshewan, Denside, and Tannadice—with respective accommodation for 67, 75, and 133 children, had (1884) an average attendance of 53, 31, and 86, and grants of £53, 6s. 7d., £26, 7s. 7d., and £90, 4s. 10d. Valuation (1857) £11,626, (1885) £14,883, 7s. Pop. (1801) 1373, (1841) 1654, (1861) 1438, (1871) 1286, (1881) 1254.—*Ord. Sur.*, shs. 57, 56, 1868-70.

Tanner, Water of. See ABOYNE.

Tantallon Castle, an ancient ruin on the coast of North Berwick parish, Haddingtonshire, 3 miles E of the town. It stands, fronting the Bass, on a lofty precipitous rock, whose base is washed on three sides by the sea; and on the SW side, where alone it is accessible, it was defended by two ditches of extraordinary depth, and by very massive towers. The entrance was over a drawbridge, through a strong, deep stone gateway. The castle itself, in its outer structure, is still comparatively entire, but wholly unroofed and in a state of desolation. Its interior is a maze of broken stair-cases, ruined chambers, and deep, dismal subterraneous dungeons. So strong was the castle in position, and so skilful in construction, that previous to the invention of gunpowder, it was regarded as impregnable, insomuch that to 'ding doun Tantallon' was thought the same kind of feat as to 'mak a brig to the Bass.' Sir Walter Scott, in *Marmion,* thus finely describes its former condition:—

> ——————'Tantallon vast,
> Broad, massive, high, and stretching far,
> And held impregnable in war.
> On a projecting rock it rose,
> And round three sides the ocean flows,
> The fourth did battled walls enclose,
> And double mound and fosse;
> By narrow drawbridge, outworks strong,
> Through studded gates, an entrance long,
> To the main court they cross.
> It was a wide and stately square,
> Around were lodgings fit and fair,
> And towers of various form,
> Which on the coast projected far,
> And broke its lines quadrangular;
> Here was square keep, there turret high,
> Or pinnacle that sought the sky,
> Whence oft the warder could descry,
> The gathering ocean-storm.'

The date of the castle and the circumstances of its erection are unknown. It comes into notice with the rising fortunes of the family of Douglas, who obtained the barony of North Berwick about the year 1371, and whose bloody heart crumbles on the stone shield above the entrance. In 1479, 24 years after the Douglas forfeiture, Archibald, fifth Earl of Angus—the well-known 'Bell-the-cat'—received a grant of it from James III.; and he afterwards so figured in connection with it as to have furnished subjects for some of Scott's most graphic delineations. The next Earl of Angus, after he had married the queen-mother of James V., and lost influence over the person and councils of that young monarch, shut himself up in Tantallon, and defied for a time the whole hostile force of the kingdom. The monarch went in person to reduce it, sat down before it in September 1528, and borrowed from the castle of Dunbar, to aid him in his operations, two great cannons, called 'Thrawn-mouth'd Meg and her Marrow,' also 'two great bocards and two moyons, two double falcons and four quarter-falcons,' for the safe redelivery of which to their owner, the Duke of Albany, three lords were left in pledge at Dunbar. Yet, in spite of his great preparations and formidable efforts, James was compelled to raise the siege; and he afterwards obtained possession of it only by Angus' fleeing to England, and by a compromise with Simon Panango, the governor. After James V.'s death, the Earl obtained leave to return from his exile; in 1543 he was restored to his possessions, and began to make Tantallon stronger than before; and here he died in 1556. In 1639, the Covenanters, provoked at its lord, the Marquis of Douglas, making a stand in it for kingcraft and prelacy, at length 'dang doun Tantallon,' and even garrisoned it against the King. About the beginning of the 18th century, Sir Hew Dalrymple, president of the Court of Session, bought the castle, along with the circumjacent barony, from the Duke of Douglas, dismantled it, and gave it up to decay. On 26 Aug. 1878 the Queen, Prince Leopold, and the Princess Beatrice drove over from Broxmouth to Tantallon, which some have claimed as the birthplace of Gawin Douglas (1474-1522), the poet-bishop of Dunkeld.—*Ord. Sur.*, sh. 41, 1857. See vol. iv. of Billings' *Baronial Antiquities* (1852) and the works cited under the BASS.

Taransay, an island of Harris parish, Outer Hebrides, Inverness-shire, off the entrance of West Loch Tarbert, 1¼ mile W of Harris mainland, and 3½ miles NE of Toe Head, at the N side of the W entrance of the Sound of Harris. It measures 4½ miles in length from NE to SW, and 3 miles in extreme breadth; comprises two peninsulated hills, 750 feet high, and a connecting narrow sandy isthmus; consists mainly of gneiss rock, traversed by veins of granite, and very scantily covered with soil; and affords to its inhabitants little means of support except facilities for fishing. Pop. (1861) 55, (1871) 68, (1881) 55.

Tarbat (Gael. *tairbeart,* 'an isthmus'), a coast parish in the north-eastern extremity of Ross and Cromarty, containing the post-office and fishing village of PORTMAHOMACK, 9⅝ miles ENE of Tain and 9 NE of Fearn station. Containing also ROCKFIELD and a small portion of INVER, it is bounded NW by the Dornoch Firth, SE by the Moray Firth, S by Fearn, and W by Fearn and—for 3 furlongs—Tain. Its utmost length, from NNE to SSW, is 7⅜ miles; its utmost breadth is 3¼ miles; and its area is 7660¾ acres, of which 2870½ belong to Cromarty, and 7 are water, 818 foreshore, and 49 tidal water. The coast, extending 7⅛ miles east-north-eastward and north-north-eastward along the Dornoch Firth, and 6¾ south-south-westward along the Moray Firth, to the latter presents a bold, rock-bound front, which, S of Rockfield, rises rapidly to heights of 100 and 200 feet above sea-level. Along the Dornoch Firth it is not so steep, and at Inver is fringed with foreshore 7 furlongs in breadth. Tarbat Ness, 50 feet high, and 3 miles NNE of Portmahomack, is crowned by an elegant lighthouse, erected in 1830 at a cost of £9361. The light, which is visible at a distance of 18 nautical miles, is intermittent, continuing in sight for 2½ minutes, and then eclipsed for ½ minute. At various points are six natural harbours and a number of small creeks; and several curious caverns pierce the south-eastern coast. The predominant rock is Old Red Sandstone; but the small vein of limestone, that runs from the North Sutor to Tarbat Ness, crops out at Geanies. The soil is generally light and sandy, but in some parts gives place to a deep, black loam. The great improvements carried out on the Geanies estate by the late Mr Kenneth Murray have already been described in the article FEARN. Antiquities, other than those noticed under BALONE and CASTLEHAVEN, are some so-called 'Roman' remains on Tarbat Ness, a 'Gallow Hill,' sites or vestiges of three pre-Reformation chapels, and in the churchyard, the 'Dingwall's Tomb' and fragments of a 'Danish' cross. Geanies House is the only mansion; but 2 proprietors hold each an annual value of more than £2900, and 2 of between £100 and £500. Tarbat is in the presbytery of Tain and the synod of Ross; the living is worth £310. Both the parish church and a Free church stand close to Portmahomack. Two new public schools, Old and West, with respective accommodation for 289 and 68 children, had (1884) an average attendance of 147 and 63, and grants of £92, 10s. 8d. and £30, 17s. 8d. Valuation (1860) £4918, (1885) £5314, 16s. 8d. Pop. (1801) 1343, (1831) 1809, (1861) 2269, (1871) 2182, (1881) 1878, of whom 1244 were Gaelic-speaking.—*Ord. Sur.*, sh. 94, 1878.

Tarbat House, the seat of Viscount Tarbat, in Kilmuir-Easter parish, Ross and Cromarty, near the NW side of Nigg Bay, and 7 furlongs SSE of Kildary station. It was built by John, Lord Macleod, in the latter part of the 18th century, and has stately avenues and beautiful gardens. New Tarbat Castle, once the seat of the Earls of Cromarty, stood near the site of the present mansion, and was a stately, turreted edifice,

which fell into dilapidation after the third Earl's forfeiture in 1746, and has left some remains. See CROMARTY.—*Ord. Sur.*, sh. 94, 1878.

Tarbert, a village and small seaport in the parishes of Kilcalmonell and South Knapdale, Argyllshire, 35 miles NNE of Campbeltown and 13½ S of Lochgilphead. It stands at the E end of the isthmus between East Loch Tarbert and West Loch Tarbert, separating the peninsula of Kintyre from the district of Knapdale. That isthmus is only 1⅛ mile across, and was anciently protected by three castles—one in the centre, one at the head of the West Loch, and one on the S side of the East Loch. The ruin of the last of these castles still exists, in grouping with the village, and is the subject of curious popular traditions. The village probably arose under protection of the castle—at all events it is a place of much antiquity; and it is so situated around the head of the East Loch, with command over its natural harbourage, as to have possessed from the earliest time as much commerce as the circumstances of the surrounding district could give it. The loch, projecting westward from Loch Fyne, is of small size—only 7 furlongs long, and nowhere more than ½ mile broad; but it is a curious and singularly safe and landlocked natural harbour, and is entered by so narrow and circling a passage between low ridges of naked rock, that a steamer, in sailing through it, appears to a stranger to be irretrievably rushing upon the crag. On its S side near the head is a steamboat quay; and both here and all over the inner space of the loch may be seen in the fishing season a very numerous fleet of herring-boats. The steamers from Glasgow to Ardrishaig call regularly at this harbour. The village is inhabited principally by fishermen, and is the resort, during the herring fishery season, of several hundreds of fishermen from other parts. It has a post office under Greenock, with money order, savings' bank, and telegraph departments, four inns, several neat villas, a branch of the Union Bank, a *quoad sacra* church, a Free church, a new public school, and fairs for horses, etc., on the Wednesday of March and the Tuesdays of June and November before Lochgilphead, and on the last Thursday of July. Pop. of village (1861) 1254, (1871) 1434, (1881) 1629, of whom 793 were females, and 508 were in South Knapdale parish; of *q. s.* parish (1871) 1866, (1881) 2017, of whom 1261 were in Kilcalmonell, 7 in Saddell, and 556 in South Knapdale.—*Ord. Sur.*, sh. 29, 1873.

Tarbert, Loch. See JURA.

Tarbert, Loch, East and West, two indentations of the sea on the opposite coasts of Harris, approaching each other to within ¼ mile. (See HARRIS.) East Loch Tarbert is 5½ miles long, and from 4½ to nearly 2 miles broad. Forking at the head into two slender bays, it embosoms several islets, and has the considerable island of Scalpa at its entrance. West Loch Tarbert is 6 miles long, and diminishes in breadth from 4½ miles to nearly a point; it is screened from the fierce W winds by Taransay; and it is overhung by lofty mountains, which stoop precipitously down to its margin.

Tarbert, Loch, East and West, two sea-lochs approaching each other's heads to within 1⅛ mile, and separating the peninsula of Kintyre from the district of Knapdale in Argyllshire. The East Loch has already been noticed in our article on TARBERT. The West Loch extends 10 miles nearly due north-north-eastward, and measures ⅝ mile in mean breadth. Over all its extent it has the calm aspect of a fresh-water lake, and is picturesque and lovely. Three islets lie in it; soft and moderately high hills recede from its margins; woods and enclosures fling their images upon its waters; and a profusion of cottages, farm-houses, villas, and mansions, with the villages of Laggavoulin and Kilcalmonell, sit upon its banks. At its head is a quay for the accommodation of the Islay steam-packet. An Act was passed in 1883 for connecting the two lochs by a canal, 18 feet deep and 56 wide, at a cost of £200,000.

Tarbet, a hamlet in Arrochar parish, Dumbartonshire, on the western shore of Loch LOMOND, 1⅝ mile E by N of Arrochar village at the head of Loch Long. It has a steamboat pier and a large hotel. All the Loch Lomond steamers call at it; and many tourists pass from it across the isthmus to Arrochar. It stands on the road from Inveraray to Dumbarton by way of Luss. —*Ord. Sur.*, sh. 38, 1871.

Tarbolton, a village and a parish in Kyle district, Ayrshire. The village, standing near the right bank of the Water of Fail, by road is 8½ miles S of Kilmarnock, 7 NE by E of Ayr, and 1½ NNW of Tarbolton station on a loop-line (1870) of the Glasgow and South-Western railway, this being 4¼ miles WSW of Mauchline Junction. Occupying a considerable area, and containing a number of neat houses, it has a post office, with money order, savings' bank, and telegraph departments, 2 hotels, a town-house (1836), a cattle-show on the first Monday of May, and a fair on the Tuesday after 11 June. The parish church, erected in 1821 at a cost of £2500, is a good edifice, with 950 sittings, a four-dial clock, and a spire 90 feet high. There are also a Free and a U.P. church. In 1671 Tarbolton, granted to John Cunninghame of Enterkine, was constituted a burgh of barony, with right to hold a weekly market. Two bailies and twelve councillors are annually elected by the householders in December. Pop. (1841) 1083, (1861) 1154, (1871) 829, (1881) 922.

The parish, containing also the village of ANNBANK, is bounded NW and NE by Craigie, E by Mauchline, SE by Stair, S by Coylton, and W by Coylton, St Quivox, and Monkton. Its utmost length, from E by N to W by S, is 6¼ miles; its utmost breadth is 5⅛ miles; and its area is nearly 19 square miles or 12,141⅜ acres, of which 82 are water. The Water of FAIL runs south-eastward across the interior to the river AYR, which winds 9⅛ miles west-south-westward along all the Stair and Coylton boundary, though the point where it first touches and that where it quits the parish are only 4⅜ miles distant as the crow flies. Along the Ayr the surface declines to 195 feet above sea-level; and thence it rises gently northward to 205 feet at Commonside, 302 at Afton Lodge, 424 at Torcross, 575 at Skeoch, and 437 at Coldcothill. The parish is thus undulatory, comprising softly outlined ridges, all under culture except where covered with wood. The low grounds, especially along the Ayr, comprise much pleasant close scenery; and the high grounds command magnificent prospects, over land and sea, to bold and distant backgrounds. The rocks are variously Old Red Sandstone, rocks of the Carboniferous formation, and trap. Coal was worked here so early as 1497. Nearly eight-ninths of the entire area are in tillage; some 950 acres are under wood; and the rest is either meadow or morass. At Parkmoor are trenches of a reputed Roman camp; and other antiquities are noticed under FAIL and COILSFIELD. The 'prophet,' Alexander Peden (1626-86), was schoolmaster at Tarbolton; and Dr William Ritchie, professor of divinity in Edinburgh University, who died here in 1829, was minister. In 1581, when Esmé Stuart, Lord d'Aubigny, was created Duke of Lennox, one of the titles given him was Lord Tarbolton. The self-taught sculptor, James Thom (1799-1850), of 'Tam o' Shanter' and 'Souter Johnny' fame, was born in the upper part of the parish, within a mile of Lochlee, which from 1777 to 1784 was the home of Robert Burns (1759-96). Both the village and its neighbourhood abound with reminiscences of the poet. To the Tarbolton lodge of Freemasons he addressed a well-known *Farewell;* and at Tarbolton in 1780 he started a debating society, the Bachelors' Club. His extraordinary piece, entitled *Death and Dr Hornbook,* is said to have been written with the view of burlesquing a person of the name of Wilson, who united the vocations of parish schoolmaster and a vendor of medicines. And at COILSFIELD or Montgomerie, Mary Campbell, his 'Highland Mary,' was 'byreswoman' or dairymaid. Mansions are COILSFIELD or Montgomerie, Afton Lodge, ENTERKINE, and SMITHSTONE; and 8 proprietors hold each an annual value of £500 and up-

wards, 11 of between £100 and £500. Tarbolton is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £460. The present parish comprises the ancient parish of Tarbolton and the larger part of the parish of Barnwell. Ancient Tarbolton was twice subjected to the monks of Fail, yet did not remain with them, but continued to be an independent rectory; and in 1429 it was erected into a prebend or canonry of Glasgow Cathedral. Barnwell, however, was a vicarage of the monks of Fail; and in 1653 it was annexed partly to Tarbolton, and partly to Craigie. Its church, which stood near an old castle of the same name, was then allowed to go to ruin. A chapel of ease was built at Annbank in 1871; and two public schools, Annbank and Tarbolton, with respective accommodation for 469 and 324 children, had (1884) an average attendance of 400 and 213, and grants of £325, 3s. 6d. and £187, 1s. Valuation (1860) £14,474, (1885) £21,552, 5s. 7d., *plus* £5908 for railway. Pop. (1801) 1766, (1831) 2274, (1861) 2669, (1871) 3219, (1881) 3599.—*Ord. Sur.*, shs. 14, 22, 1863-65.

Tarff Water, a stream of Boleskine and Abertarff parish, Inverness-shire, formed by two head-streams at an altitude of 1000 feet, and running 5½ miles north-by-westward to Loch Ness (50 feet) at Fort Augustus.—*Ord. Sur.*, shs. 63, 73, 1873-78.

Tarff Water and **Station.** See TONGLAND.

Tarfside. See LOCHLEE.

Tarf Water, a dark, troutful stream of Blair Athole parish, N Perthshire, rising close to the Inverness-shire border at an altitude of 2692 feet, and running 11¼ miles east-by-southward along a wild rocky glen, till, after a total descent of 1200 feet, it unites with a lesser stream to form the TILT. About 15 yards above the meeting of the waters was a deep and dangerous ford, Poll Tarff, whose passage by the Queen, on 9 Oct. 1861, forms the subject of a well-known picture by Carl Haag, and which now is spanned by the Bedford Memorial Bridge (1885).

Tarf, Water of, a trout-stream of Lochlee parish, N Forfarshire, rising close to the Aberdeenshire border at an altitude of 2100 feet, and running 7⅝ miles south-south-eastward, till, after a descent of 1420 feet, it falls into the North Esk, ½ mile below Tarfside village.—*Ord. Sur.*, sh. 66, 1871.

Tarland, a village and a parish of Aberdeenshire. The village, lying, 440 feet above sea-level, on the left bank of Tarland Burn, is 5½ miles NNW of Aboyne station, 16 SW of Aboyne, and 31 W of Aberdeen, under which it has a post office, with money order, savings' bank, and telegraph departments. A burgh of barony, it has also branches of the Union and Aberdeen Town and County Banks, two hotels, a café and reading-room, and fairs on 5 Jan. (if a Wednesday, otherwise on the preceding Wednesday), the second and the last Wednesday of Feb. *o. s.*, the first Wednesday of May and the Wednesday after 26 May, the Friday after St Sairs (Wednesday after last Tuesday of June), the second Wednesday after first Tuesday of Oct. *o. s.*, and 22 Nov. (if a Tuesday, otherwise on the Tuesday and Wednesday following). Pop. (1861) 316, (1871) 315, (1881) 374.

The parish, comprising the ancient parishes of Tarland and Migvie, consists of four separate portions, and has a total area of 27⅛ square miles or 17,381¼ acres.—The portion containing Tarland village is bounded N by Leochel and Cushnie, E and S by Coull, and W by Logie-Coldstone. Its utmost length, from N to S, is 3⅝ miles; its utmost breadth is 3¼ miles; and its area is 4719¼ acres. Tarland Burn drains it towards the river Dee; and its highest point is Sockaugh or Cushnie Hill (2032 feet), at the meeting-point of Tarland, Leochel, and Logie-Coldstone parishes.—The second portion, containing Migvie church, 3⅝ miles WNW of Tarland village, is bounded N by Towie and on all other sides by Logie-Coldstone. Its utmost length, from NNW to SSE, is 2⅝ miles; its breadth varies between 1 and 1¼ mile; and its area is 1969¾ acres. It likewise is drained towards the Dee by Tarland Burn, and its surface rises north-north-westward from 600 to 1500 feet.—The third or Deskry-side portion of Migvie, 7 miles NW of Tarland village, is bounded N by Glenbucket and Strathdon (detached), E by Towie, SE by Logie-Coldstone, and W and NW by Strathdon. Its utmost length, from N by E to S by W, is 3⅜ miles; its breadth varies between 5 furlongs and 1¾ mile; and its area is 2398¾ acres. DESKRY Water winds 5½ miles north-eastward, north-north-eastward, and west-south-westward—for 1⅝ mile across the interior, but elsewhere along the Logie-Coldstone and Strathdon boundaries—till it falls into the DON, which itself winds 3⅝ miles north-north-eastward and east-south-eastward along all the north-western and northern boundary. The surface here ranges in altitude between 750 and 1250 feet.—The fourth or Donside portion of Tarland, 13 miles WNW of Tarland village and 18 SSW of Rhynie, is bounded NW by Kirkmichael in Banffshire and on all other sides by Strathdon. Its utmost length, from WNW to ESE, is 6½ miles; its breadth varies between ½ mile and 4½ miles; and its area is 8293¾ acres. ERNAN Water runs 7¼ miles east-south-eastward to the DON, which here winds 5⅛ miles east-north-eastward along all the southern boundary; and the surface rises west-north-westward from 1000 to 2553 feet. Granite is the predominant rock; and the soil of the arable lands is clayey or loamy. Scarce a vestige remains of Migvie Castle, a seat of the Earls of Mar, near Migvie church; but in the churchyard and on the Kirkhill are three sculptured stones. There is a Picts' house on Mill of Migvie farm, and another at Culsh; and several stone cists have been found on the farm of the Meadow; but a good many cairns and stone circles have been almost wholly removed. Mansions are Tarland Lodge, Tillypronie, Hopewell, Candacraig, Edinglassie, Skellater, and Inverernan (the last four all in the Donside portion of Tarland); and there is one estate with a gross rental of over £2000, besides 7 with a rental of between £390 and £625. Giving off its westernmost portion to CORGARFF *quoad sacra* parish, Tarland and Migvie is in the presbytery of Kincardine O'Neil and the synod of Aberdeen; the living is worth £285 (16 chalders). Tarland church is a good Gothic structure, built in 1870 at a cost of £2300. Migvie church, built about 1777, contains 250 sittings, and is served on the afternoon of every second Sunday. There is a Free church of Tarland; and two public schools, Migvie and Tarland, with respective accommodation for 65 and 193 children, had (1884) an average attendance of 39 and 122, and grants of £31, 1s. 6d. and £107, 2s. Valuation (1860) £4539, (1885) £7262, 10s. Pop. (1801) 922, (1831) 1074, (1861) 1246, (1871) 1275, (1881) 1173, of whom 1051 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 76, 75, 1874-76.

Tarlogie. See TAIN.

Tarradale. See URQUHART AND LOGIE-WESTER.

Tarransay. See TARANSAY.

Tarras Water, a trout-stream of Eskdale, E Dumfriesshire, rising at an altitude of 1748 feet on Hartsgarth Fell, close to the Roxburghshire border, and running 11 miles south-south-westward through or along the border of Ewes, Canonbie, and Langholm parishes, till, after a descent of 600 feet, it falls into the Esk at a point 2½ miles SSE of the town of Langholm. It has a very rugged channel and romantic banks. So impetuous is its course, and so obstructed by rocks, that any person whom it might sweep away is in less danger of being drowned than of being dashed to pieces. Hence the old doggerel:

> 'Was ne'er ane drowned in Tarras, nor yet in doubt,
> For ere the head can win down, the harns are out.'

Another old rhyme, which celebrates the localities in Liddesdale and Eskdale most noted for game, gives prominent importance to the Tarras:

> 'Bilhope-braes for bucks and raes,
> And Carit-haugh for swine,
> And Tarras for the good bull-trout,
> If he be ta'en in time.'

'The bucks and roes, as well as the old swine,' says Sir Walter Scott, in a note to the *Lay of the Last Minstrel*,

'are now extinct; but the good bull-trout is still famous.' See HARDEN.—*Ord. Sur.*, sh. 11, 1863.

Tarrensay. See TARANSAY.

Tarth Water, a sluggish but troutful rivulet of Peeblesshire, rising 2⅛ miles SW of West Linton, and running 6¾ miles south-south-eastward, chiefly along the boundaries of Linton, Dolphinton, Kirkurd, Newlands, and Stobo parishes, till it falls into Lyne Water near Drochil Castle.—*Ord. Sur.*, sh. 24, 1864.

Tarves, a village and a parish of central Aberdeenshire. The village, standing 274 feet above sea-level, is 5⅝ miles NE of Old Meldrum, 6¾ W by N of Ellon, and 5½ NNW of Udny station. It has a post office under Aberdeen and a branch of the Aberdeen Town and County Bank.

The parish, very irregular in outline, is bounded N by Methlick, NE by New Deer, E by Ellon and Methlick (detached), SE by Udny, SW by Bourtie and Meldrum, and NW by Fyvie. Its utmost length, from NNE to SSW, is 8⅝ miles; its utmost breadth, from E to W, is 7¾ miles; and its area is 25½ square miles or 16,333⅜ acres, of which 30½ are water. The only stream of any size is the YTHAN, which here has a south-south-easterly course of nearly 2¾ miles, viz., 1¼ mile along the boundary with Methlick proper, then 1½ furlong along the base of the Schivas or north-eastern wing of the parish, and lastly 1¼ mile along the boundary with the detached portion of Methlick. The triangular Upper Lake (2⅜ × 1 furl.) in the Haddo grounds lies on the Methlick boundary, 2½ miles N by E of the village. In the extreme E the surface declines to 48 feet above sea-level; and thence it rises gently to 578 feet at the Hill of Skilmafilly on the New Deer boundary, 389 at the Earl of Aberdeen's monument on the Hill of Ythsie, 458 near Tolquhon, 363 near Courtstone, and 476 at Couchercairn near the western border. The rocks include granite, gneiss, and limestone; and the soil for the most part is a fertile loam, incumbent on clay drift. Except in the vicinity of Haddo House, the parish is rather bare of trees. Cattle-breeding is largely carried on; and an old established cattle, horse, and sheep fair is held on the Friday after 28 August at Bartol or Bartle (Bartholomew) Chapel, 4⅝ miles WNW of the village and 5 N of Old Meldrum. Schivas, now a farmhouse, 4⅝ miles NNE of the village, was built about 1640, and was the seat of a Roman Catholic branch of the Grays. The ruined castle of Tolquhon, 2½ miles S by E of the village, with the exception of an older tower, was built by William Forbes in 1584-89. Held first by the Prestons, and then, from 1420, by the Forbeses, the Tolquhon estate was purchased in 1716 by Lieut.-Col. Francis Farquhar, and from him it passed to the second Earl of Aberdeen. The remains of Tillyhilt Castle (1583) are 1½ mile WNW of the village. The Earl of Aberdeen is sole proprietor, and one of his titles is Baron Tarves. Giving off portions to the *quoad sacra* parishes of Savoch and Barthol Chapel, Tarves is in the presbytery of Ellon and the synod of Aberdeen; the living is worth £280. The parish church, at the village, was built in 1798, and contains 870 sittings. At Craigdam, 1½ mile WSW, is a U.P. church (1806; 600 sittings); and three public schools—Barthol Chapel, Craigdam female, and Tarves—with respective accommodation for 132, 80, and 261 children, had (1884) an average attendance of 99, 60, and 171, and grants of £96, 4s., £54, 19s., and £156, 13s. 6d. Valuation (1860) £9310, (1885) £15,109, 5s. 10d. Pop. (1801) 1756, (1831) 2232, (1861) 2509, (1871) 2443, (1881) 2558, of whom, *quoad sacra*, 1827 belonged to Tarves, 169 to Savoch, and 562 to Barthol Chapel.—*Ord. Sur.*, shs. 87, 77, 86, 1874-76.

Tarvit Hill. See CUPAR.

Tayfield, a mansion in Forgan parish, Fife, close to Newport, and opposite Dundee.

Tayinloan. See KILLEAN AND KILCHENZIE.

Tay, Loch, a magnificent lake in Breadalbane, Perthshire. Commencing at the foot of Glendochart and Glenlochy, where it receives the united waters of these glens, and lying 355 feet above sea-level, it extends 14½ miles north-eastward from the vicinity of KILLIN to KENMORE, where it discharges itself by the river Tay. Its breadth ranges between 3⅛ furlongs and 1⅛ mile, and its depth between 15 and 100 fathoms. It is strictly a Highland lake, similar in character to the lakes of Glenmore-nan'-albin, flanked by mountains and occupying a glen. The mountains on its N side form a bulky chain, rising into bare, lofty, finely-outlined heads, the most conspicuous of which is BEN LAWERS (3984 feet), the highest summit in Perthshire. The heights on the S side are soft, regular, and much less lofty; but, like those on the N side, are well clothed with heath and verdure. Good roads are carried along both sides of the lake from end to end. The N road is the best for carriages, and the one most commonly taken by travellers; but it has the disadvantage of being too distant from the lake's margin, too high up the mountain slope, to command as good views as those which are obtained from the other road. Though it generally overlooks almost the entire expanse of the lake, the prospect is unvaried and monotonous, the foregrounds tame or altogether wanting; and there is an almost total absence of those delicious close views which are the delight alike of the artist and the connoisseur. Had this road been carried nearer to the margin of the lake, and amid the windings of the beautiful promontories and bays with which it is bounded, the effect of a ride up the N shore of Loch Tay would have been very different. The man of taste would have selected this line; nor would he have found fault with the additional 2 miles of road which are saved by the straightforward views of Marshal Wade. In taking the S road, however, the case is materially different. This road generally runs near the lake, and follows in numerous instances the sinuosities of its margin and the inequalities of the ground. The declivities of the southern range of mountains are, besides, much more varied and intricate than those on the N; while the general outline of the northern range, being bolder and loftier than the southern, forms a striking termination to the views from this side. Few roads, therefore, are more productive of a succession of picturesque landscapes, or offer greater temptations to the traveller than this. The landscapes here present an ever-varied foreground; are rich and full in the middle distance; while the extreme distance is grand and imposing. Near the foot of the lake, 3 furlongs from Kenmore, is a small wooded islet, with the shapeless ruins of an Augustinian priory, founded in 1122 by Alexander I. for himself and the soul of his queen, Sibylla, a natural daughter of Henry I. of England, who on 12 June of that year had died suddenly at the castle of Loch Tay, and whom he here interred. On 10 Sept. 1842 a splendid flotilla of six gorgeous barges rowed up the lake to Auchmore, bearing Queen Victoria and Prince Albert, the Marquis of Breadalbane, Sir Robert Peel, etc., etc. Since 1883 a steamer has plied to and fro on Loch Tay, which is the finest salmon lake in Scotland. The fish range from 18 to 48 lbs., and in Feb. 1880 no fewer than 26, together weighing 551 lbs., were caught in five days by a single rod.—*Ord. Sur.*, shs. 46, 47, 55, 1869-72.

Taymount, a mansion in Kinclaven parish, Perthshire, on the right bank of the Tay, 2 miles NNE of Stanley.

Taymouth Castle, the seat of the Earl of Breadalbane, in KENMORE parish, Perthshire, near the right bank of the winding Tay, 1 mile NE of the foot of Loch Tay, and 5 miles WSW of Aberfeldy. Built between 1801 and 1842 on the site of the Castle of Balloch (1580), it is a magnificent pile of four stories, with round towers at the angles, wings two stories high at opposite corners, and a massive central quadrangular tower, forming an airy pavilion 150 feet high. It is constructed of a dark grey stone; and the interior is fitted up in a most princely style, and adorned with paintings by Titian, Rubens, Vandyke, etc. The pleasure-grounds, comprising a circuit of 13 miles, contain a great number of noble trees, and are laid out in a style of elaborate decoration which has sometimes been pronounced too fine and formal. The Queen and Prince Albert made a visit of three days to

Taymouth Castle in Sept. 1842; and on 3 Oct. 1866 the Queen drove over again from Dunkeld. Sir Colin Campbell of Glenorchy (*c.* 1400-78), younger son of Sir Duncan Campbell of Lochow, received from James III. the barony of Lawers. Among his descendants have been Sir Duncan Campbell, created a baronet in 1625; Sir John Campbell (1635-1716), created Earl of Breadalbane in 1681, whom Macky described as 'grave as a Spaniard, cunning as a fox, wise as a serpent, and slippery as an eel;' John, fourth Earl (1762-1834), created Marquess of Breadalbane in 1831; and Gavin, seventh and present Earl (b. 1851; suc. 1871), who is thirteenth in descent from Sir Colin, and who holds 372,729 acres in Perth and Argyll shires (an area larger than that of 19 of the 33 Scotch counties), valued at £49,931 per annum.—*Ord. Sur.*, sh. 55, 1869. See Breadalbane, Kilchurn Castle, Glencoe, and chap. xxxii. of T. Hunter's *Woods and Estates of Perthshire* (Perth, 1883).

Taynuilt, a hamlet in Muckairn parish, Argyllshire, near the southern shore of Loch Etive, with a station on the Callander and Oban railway, 15½ miles E by N of Oban. It has an inn and a post office, with money order, savings' bank, and telegraph departments.

Tayport. See Ferry-Port-on-Craig.

Tay, The, a river draining the greater part of Perthshire and passing off to the sea between Forfarshire and Fifeshire. It issues from Loch Tay, or rather begins there to take the name of Tay; but it is really formed by two great head-streams which rise among the Grampians on the mutual border of Perth and Argyll shires. The northern stream bears successively the names of the Ba, the Gauir, and the Tummel; and, in its progress, it forms, by expansion of its waters, the three great lakes of Lydoch or Laidon, Rannoch, and Tummel. It rises at an altitude of 2309 feet, within ¼ mile of an affluent of the Etive, and 4¼ miles SSW of Kingshouse Inn; and thence it winds 58⅛ miles east-north-eastward and south-south-eastward—viz., 29⅛ miles to its efflux from Loch Rannoch (668 feet), 15¼ thence to its efflux from Loch Tummel (480 feet), 4⅝ thence to the Garry's confluence, and 9⅛ thence to its own confluence with the Tay. It traverses or bounds the parishes of Glenorchy (in Argyllshire) and Fortingall, Logierait (detached), Dull, Blair Athole, Moulin, a part of Dowally, and the main body of Logierait. The southern one of the great head-streams bears successively the names of the Fillan, the Dochart, and the Tay; and traverses, in its progress, Loch Dochart and Loch Tay. Rising at an altitude of 2980 feet on the northern side of Benloy, at the boundary of Killin with Argyllshire, it flows 56¾ miles east-north-eastward—viz., 25¼ miles to the head of Loch Tay, 14½ miles through the lake, and 17 miles from its foot to a confluence with the Tummel at an altitude of 185 feet. It bounds or traverses the parishes of Killin, Kenmore, Dull, Fortingall, Logierait, and Little Dunkeld, and receives the Lochy, the Lyon, and other streams. From its junction with the Tummel to its junction with the Earn, where it begins to expand into an estuary, the Tay winds 36¾ miles southward, eastward, southward, and east-south-eastward; and over this part of its course, it has on its right bank Little Dunkeld, Kinclaven, Auchtergaven, Redgorton, Tibbermore, Perth, and Rhynd,—and on its left bank Logierait, Dunkeld and Dowally, Caputh, Cargill, St Martins, Scone, Kinnoull, Kinfauns, and St Madoes. As an estuary, it extends 24½ miles from the mouth of the Earn to the German Ocean; has for the first 15 miles a breadth of from 3⅛ furlongs to 3¼ miles, and the direction of NE by E; has over the other 9½ miles a prolonged contraction of from 7 furlongs to 1⅛ mile, and a prevailing easterly direction; and separates Abernethy in Perthshire and the parishes of Newburgh, Abdie, Flisk, Balmerino, Forgan, and Ferry-Port in Fife on its right bank, from St Madoes, Errol, Inchture, and Longforgan in Perthshire, and Liff and Benvie, Dundee, Monifieth, and Barry in Forfarshire on its left. Its entire length of course, jointly as a river and as an estuary, is thus, if measured from the source of the Ba, 119⅜—if measured from the source of the Fillan, 118 miles.

The tributaries of the Tay, even excluding the secondary ones, are so numerous, that only the principal must be named. Those of the northern great head-branch are only two—the Ericht, which falls into Loch Rannoch, and the Garry, which brings along with it the Edendon, the Erichdie, the Bruar, and the Tilt, and falls into the Tummel a little below Killiecrankie. Those of the southern great head-branch are also but two—the Lochy, which joins the Dochart at the village of Killin, and the Lyon, which brings along with it Glenmore Water, and joins the Tay 2¾ miles below the foot of Loch Tay. Those of the united stream are the Bran, on the right bank, opposite the town of Dunkeld; the Isla, swollen by the Dean, the Ericht, and other streams, and entering on the left bank, near Cargill station; the Shochie, on the right bank, at Luncarty; the Almond, on the same bank, 2½ miles above Perth; and the Earn, also on the same bank, at the commencement of the estuary, or 2¼ miles above the town of Newburgh. Those of the estuary are all inconsiderable, the largest being Dighty Water, which disembogues itself from Forfarshire, 1¾ mile below Broughty Ferry.

From the vicinity of Broughty Ferry on the one shore, and Ferry-Port-on-Craig on the other, to the mouth of the estuary, there is a sweep of sandbank, called Barry or Goa Sands on the N side, and Abertay Sands on the S. The opening or breadth of channel beneath the two sides of the sandbank varies from 5½ furlongs to 1⅞ mile; and the depth of water is about 3 fathoms, but, higher up the firth, increases to 6. Sandbanks occur elsewhere, especially a large and shifting one opposite Dundee; but they have all been rendered harmless to navigation by means of dredging, buoys, lighthouses, and charts. The estuary in general is shallow, and receives much *débris* from the steady and large current of the river. Though it cannot compare in spaciousness and some other properties with the Forth, it is not a little commodious, and may be considered as, over large part of its extent, a continuous harbour. The tide flows to a point about 2 miles above Perth; and, in consequence of improvements made in the channel, vessels of 100 tons can pass up to Perth harbour. The Tay Bridge is described under Dundee; and the unrivalled salmon fisheries of the river and estuary are treated of in our supplementary article on the Fisheries of Scotland.

The extent of surface drained by the Tay and its tributaries is computed at 2400 square miles, and that of the Spey, the entirely Scottish river next to it in size, at 1190 square miles. The geographic positions and character of the district whence most of the waters are drawn, being in the case of the two rivers very similar, the Tay may be supposed to discharge about twice as much water as the Spey. Dr Anderson, making a nice measurement for a judicial purpose, determined the quantity of water which, in the mean state of the river, flows through a section of it opposite Perth, to be at the rate of 3640 cubic feet per second. The river, as represented on a map, or imagined after a survey of the vast district which composes its basin, appears emphatically 'the many-headed Tay;' and, in consequence of its great feeders coming down like the main arteries on a half-moon-shaped leaf, it has less inequality in its stream than occurs in either the Spey or any other of our Highland rivers. The variety of its origin, too, affords such a compensation of rain as always, except in seasons of extreme drought, to yield a sufficient bulk and altitude of water for the occupying of its path, and the beautifying of its landscape; while the wide variety in the relative distance of its sources, prevents its floods, however high, from being as sudden as those of the Spey, the Aberdeenshire Dee, and some other upland streams. Yet, owing to the gradual but great extension of the system of draining, which is prosecuted on arable grounds and on reclaimable mosses

and moorlands, the river has become considerably less equable than at a former period; it swells, during great floods, to a magnitude which never in former days belonged to it; it subsides, during a continued drought, to a corresponding diminution of volume; and, in its ordinary or mean state, it has very visibly lost some of its ancient greatness and importance. Though averagely charged at Perth, as we have seen, with 3640 cubic feet of water per second, it was reduced, in the course of the summer of 1819, to 457 cubic feet, and at the close of the summer of 1835, to a still smaller volume.

Much of the country which now forms the seaboard of the estuary, and especially the whole of the Carse of Gowrie, and the lower part of Strathtay, exhibit evidence of having, at a comparatively recent period, lain under the sea, and been gradually raised above its level by depositions from the Tay. After the Carse of Gowrie became dry land, too, the Tay seems, for a long series of years, to have made a circle round its N side, along the foot of the Sidlaw Hills, entering what was then the Firth of Earn at Invergowrie, and entirely peninsulating the Carse, or cutting it into a series of islands. Great modern changes have taken place likewise on all the vale or strata of the Tay, S of the confluence of the Tummel. Dr Macculloch, from close and various observations on cuts of corresponding rocks on the opposite sides of the stream, and on the harmonising altitude of series of alluvial terraces in the screens of the valley, calculates that the ancient level of the river, from Logierait downward, was about 100 feet above the present bed; and he adds: 'And thus, while it is easy to see how far the Tay has sunk, it would not be very difficult to compute the quantity of land or earth that has been removed and carried forwards towards the sea. When we look at this enormous waste we need not be surprised at the formation of the Carse of Gowrie, nor at the deposits which are still augmenting it; shoaling the sea about Dundee, and laying the foundations of new meadows. For this operation is still going on, and must go on as long as the Tay shall continue to flow; though diminishing in rapidity as the declivity and consequent velocity of the river itself diminish. If it is curious to speculate on the period when Perth, had it then existed, must have been a seaport, and when the narrow Tay, far above and below it, was a wide arm of the ocean, it is not less so to consider what the aspect of Strathtay itself was when the present place of Dunkeld was buried deep beneath the earth. Nor is it difficult even to see what it must have been. By laying our eye on any of the terraces, it is easy to bring the opposed one in the same plane, and thus to exclude all the valley beneath, reducing it once more to what it was when the river was flowing above. These speculations, thus pursued, may interest the artist as well as the geologist and the geographer; since, not only here, but in every deep valley of the Highlands, he would, in making such trials, be at a loss to recognise in the original shallow and rude glen, the spacious and rich valley which is now the seat of beauty and cultivation. Contemplating, in this manner, not only the Highland mountains and valleys, but those of the world at large, we are lost in the magnitude of the changes which have carried the rains of the Himalaya to the mouths of the Ganges—which, from the sediments of the Nile, have formed the land of Egypt—and which have created, out of the lofty ridges of America, the plains that now form so large a portion of its continent.'

The Tay, inclusive of its principal tributaries, is by much the most scenic of the British rivers. Its estuary, and the lowest 3 or 4 miles of its stream, are a continued expanse of loveliness, softly screened with heights or swells of the gentlest beauty. Its vale from the romantic Hill of Kinnoull, a little below Perth, to the Pass of Birnam, 2 miles below Dunkeld, is everywhere lively, frequently brilliant, and occasionally gorgeous. Its scenery hence to the mouth of the Tummel, as seen from a vantage ground in the vicinity of Dunkeld, is pronounced by Dr Macculloch singularly rich and grand, with all its features, for about 6 miles, so minutely detailed before the eye that every part of its various ornament is most advantageously seen. 'On each hand,' says he, 'rises a long screen of varied hills, covered with woods in every picturesque form; the whole vista terminating in the remoter mountains, which, equally rich and various, are softened by the blue haze of the distance, as they close in above the Pass of Killiecrankie. This general view, varied in many ways by changes of level and of position, forms the basis of the landscape for some miles; but so great are the changes in the middle-grounds, and so various the foregrounds, that although the same leading character is observed, the separate scenes are always strongly distinguished. Many distinct pictures can thus be obtained, and each of them perfectly adapted for painting; so that Strathtay is here an object to charm every spectator,—him who desires to see every thing preserved in his portfolio, and him who seeks for nothing in Nature but beauty, come under what form it may.' 'Though the western and upper branch of Strathtay, from the junction of the Tummel upward to Kenmore, 'is not, perhaps, equal in splendour to the lower and southern one, it still maintains the same character of richness throughout; while, instead of the flat extended meadows which mark the latter, it displays a considerable undulation of ground. Thus the vale of the Tay, from Dunkeld even to Kenmore, a space of 25 miles, is a continued scene of beauty; a majestic river winding through a highly wooded and cultivated country, with a lofty and somewhat parallel mountain boundary, which is itself cultivated as far as cultivation is admissible, and is everywhere covered with continuous woods or trees as high as wood can well grow. It contains, of course, much picturesque scenery; presenting not only landscapes of a partial nature, comprising reaches of the river, or transient views in the valley produced by the sinuosities of the road, but displaying the whole to its farthest visible extremity, under aspects which are varied by the casual variations of level or position, or by the accidental compositions of the fore or middle grounds. Where Ben Lawers is seen towering above all in the remotest distance, these views are peculiarly magnificent; nor is anything ever wanting which the artist could require to give fulness and interest to the nearer parts of the landscape, where, after all, the chief interest must always lie.' 'I believe it is but just to say, that Strathtay is, in point of splendour and richness, the first of the Scottish valleys.'—*Ord. Sur.*, shs. 53, 54, 55, 46, 47, 48, 49, 1865-77.

Tealing, a Forfarshire parish, whose church stands 6½ miles N of Dundee, under which there is a post office. It is bounded N by Inverarity, E by Inverarity, Murroes, and a detached section of Dundee, S by Murroes and Mains and Strathmartine, W by Caputh (detached) and Auchterhouse, and NW by Glamis. Its utmost length, from N to S, is 4⅝ miles; its utmost breadth, from E to W, is 4 miles; and its area is 7231⅜ acres, of which 4 are water, and 195 belong to a small detached portion, 3 furlongs W of the main body. Tithie Burn traces much of the southern boundary; and several rivulets, rising on the north-western border, run mainly south-eastward through the interior. Sinking in the SE to 350 feet above sea-level, the surface thence rises north-westward and northward towards the watershed of the Sidlaw Hills, attaining 510 feet near the parish church, 900 at Balluderon or Craigowl Hill, and 1104 at a nameless height 2½ miles N of the church. Trap occurs, but the principal rocks are Devonian, mostly grey slaty sandstone. 'In the lower lying portion of the parish there is a good deal of strong rich land, that yields well when skilfully managed and when the seasons suit. It is a clayey loam with a subsoil of clay and gravel, in some parts rather retentive. In part of the hollows there is also very poor soil, thin, hard, and unproductive, with very stiff subsoil. There are several instances in this parish where the land on the one side of the road is worth 25s. or 30s. an acre, and not worth more than 15s. or 20s. on the other. On the higher lying parts there is also a good deal of variety of soil, but in general it is

a moderately fertile loam, resting on a clayey or gravelly subsoil which in some parts is not so open as could be wished' (*Trans. Highl. and Ag. Soc.*, 1881). About 500 acres are pastoral or waste, as much or rather more under wood, and the rest of the land is in tillage. A subterranean building, a subterranean cave or passage, several stone coffins, and some small Roman antiquities have been found at various periods. The Rev. John Glass (1695-1773), the founder of the Glassites or Scottish Sandemanians, was minister of Tealing from 1719 till his deposition in 1728. Two proprietors hold each an annual value of more, and four of less, than £500. Tealing is in the presbytery of Dundee and the synod of Angus and Mearns; the living is worth £250. The parish church was built in 1806, and contains 700 sittings. There is also a Free church; and a public school, with accommodation for 138 children, had (1884) an average attendance of 88, and a grant of £81, 5s. Valuation (1857) £5825, (1885) £7605, 16s. Pop. (1801) 755, (1831) 766, (1861) 883, (1871) 879, (1881) 757.—*Ord. Sur.*, shs. 48, 49, 57, 1865-68.

Teaninich House, a mansion in Alness parish, Ross-shire, between Alness village and the Cromarty Firth.

Teith, The, a river of SW Perthshire, formed by two head-streams which rise within ¾ mile of one another, and within 2½ miles ENE of the head of Loch Lomond, but which so far diverge from each other as to be at one point 9½ miles asunder. The northern one, rising at an altitude of 1760 feet, runs 8½ miles E by N to Loch Doine (7½ × 2⅓ furl.; 420 feet), passes 1½ furlong thence to Loch Voil (3½ miles × 3 furl.; 414 feet), assumes then the name of the Balvag, and winds 6 miles south-south-eastward to Loch Lubnaig (3⅞ miles × 3 furl.; 405 feet), and thence, through the Pass of Leny, goes 3⅞ miles south-eastward to a confluence with the other head-stream in the vicinity of Callander. It thus has a total course of 25⅞ miles, mainly through the parish of Balquhidder, but partly through that of Callander. The southern head-stream, rising at an altitude of 1750 feet, runs 3⅞ miles south-eastward through Glengyle to Loch Katrine (8 miles × 7¼ furl.; 364 feet), from its foot passes 1⅝ mile east-by-southward through the Trossachs to Loch Achray (1¼ mile × 3 furl.; 276 feet), winds next 1⅝ mile east-south-eastward to Loch Vennachar (3¾ miles × 5 furl.; 270 feet), and proceeds thence 1⅞ mile east-north-eastward to its confluence with the other head-stream. It is thus, in a large degree, the connecting stream of a chain of most picturesque lakes; and its length of run, inclusive of its course through those lakes, is 20⅞ miles, through or along the borders of Callander, Buchanan, Aberfoyle, and Port of Monteith parishes. The Teith proper, or united stream, abounds in beautiful scenery, but has none of the grand, bold, romantic features of its head-waters. It runs 13½ miles south-eastward through or along the borders of Callander, Kilmadock, Kincardine, and Lecropt parishes. Its tributaries are numerous; but, excepting Keltie Water, they are all inconsiderable. The 'arrowy' Teith, if either its volume of water or its length of course had been made the ground of decision, would have been regarded as the parent-stream, and the Forth which joins it as the tributary. The point at which they unite is the Bridge of Drip, 2¼ miles NW of Stirling. Yielding fairly good salmon and trout fishing, the Teith is a clear stream, and, for the most part, rapid. It is excelled by none in Scotland for water-power, or for general adaptation to manufacture; yet in consequence of the want of lime and coal there is but a small aggregate of public works on its banks. —*Ord. Sur.*, shs. 46, 38, 39, 1869-72.

Templand, a village in Lochmaben parish, Dumfries-shire, 2½ miles N of the town. It has a post office under Lockerbie.

Temple, a village and a parish in the S of Edinburgh-shire. The village stands, 605 feet above sea-level, on the right bank of the South Esk, 3 miles SW of Gorebridge station, 7 S by W of Dalkeith, and 12¼ SSE of Edinburgh. It is a quiet, sequestered, little place, with a post office under Gorebridge.

The parish is bounded NE by Borthwick, SE by Heriot, S and SW by Innerleithen and Eddleston in Peeblesshire, and NW by Penicuik and Carrington. Its utmost length, from N by E to S by W, is 8⅛ miles; its utmost breadth is 5⅝ miles; and the area is 22½ square miles or 14,478¾ acres, of which 228 lie detached, and contain the greater part of Gorebridge village. The river South Esk, rising at an altitude of 1700 feet on the western slope of Blackhope Scar, winds 9⅞ miles north-by-eastward through all the length of the parish, and quits it at the influx of Fullarton or Redside Burn, which traces all the north-western border. In the extreme N the surface declines to 590 feet above the sea; and chief elevations to the E of the South Esk, as one goes up the vale, are Cockmoor (990 feet), *Torfichen Hill (1508), *Mauldslie Hill (1684), Huntly Cot Hill (1694), the Kipps (1776), and *Blackhope Scar (2136), the loftiest of the Moorfoot Hills; to the W, Toxside Moss (900), *Jeffries Corse (2004), and *Bowbeat Hill (2049), where asterisks mark those summits that culminate on the confines of the parish. The rocks of the hills are Lower Silurian; those of the lower grounds of the main body include abundance of limestone and sandstone; and those of the detached portion are carboniferous. The soil of the arable lands, though various, is generally fertile; but fully one-half of the entire area is hilly and mountainous sheepwalk, black and moorish in aspect. Through Gladhouse reservoir, on the course of the South Esk, this parish furnishes one-fourth of the entire water-supply of Edinburgh, the new works having been formally opened on 13 June 1879; and two additional reservoirs (Rosebery and Edgelaw) have been constructed for compensation purposes. Rosebery and Toxside, both noticed separately, are the chief residences; and the principal proprietors are R. Dundas, Esq. of Arniston and the Earl of Rosebery, 2 others holding each an annual value of £500 and upwards, 1 of between £100 and £500, and 4 of from £50 to £100. The present parish comprises the ancient parish of Clerkington, and the chapelries of Moorfoot and Balantradoch. Clerkington, previous to the Reformation, was a vicarage under the monks of Newbattle. Moorfoot comprehended the upper half of the vale of the South Esk; and was a chapelry established by the Newbattle monks, to whom the lands had been gifted. The chapelry of Balantradoch, after the suppression of the Knights Templars, was granted in 1312 by Pope Clement V. to the Hospitallers or Knights of St John. The three districts having been united after the Reformation, assumed their present name from the circumstance of the chapel of the Templars being adopted as their common or parochial church. Giving off its detached portion to Stobhill *quoad sacra* parish, Temple is in the presbytery of Dalkeith and the synod of Lothian and Tweeddale; the living is worth £218. The old parish church, still standing, is an oblong structure (54$\frac{7}{12}$ × 17½ feet), a simple but pleasing specimen of the transition from the First Pointed to the Scottish Decorated style. It has two long, narrow lancet windows (now blocked up), a large three-light E window, and smaller three-light windows on the S side; and it retains a piscina and Easter sepulchre. On the E gable below the belfry is an inscription which has puzzled antiquaries. The church formed part of a preceptory of the Knights Templars, which, founded by David I., and originally called Balantradoch, was the chief seat of the order in Scotland. The present parish church is a neat edifice of 1832, containing 400 sittings. There is also a Free church; and Temple public and Toxside schools, with respective accommodation for 105 and 47 children, had (1884) an average attendance of 73 and 33, and grants of £66, 18s. 6d. and £45, 10s. 6d. Valuation (1860) £7830, (1885) £10,060, *plus* £9924 for railway and waterworks. Pop. of civil parish (1801) 855, (1831) 1255, (1861) 1385, (1871) 1536, (1881) 1551; of ecclesiastical parish (1871) 658, (1881) 541.—*Ord. Sur.*, shs. 32, 24, 1857-64.

Templelands. See Strathmiglo.

Temple Liston. See Kirkliston.

Tenandry, a *quoad sacra* parish in Athole district, Perthshire. Constituted in 1836 by the presbytery, and reconstituted in 1851 by the Court of Teinds, it is in the presbytery of Dunkeld and the synod of Perth and Stirling. Stipend, £121. The church, near the right bank of the Garry, 1 mile S of Killiecrankie station, was built in 1836, and contains 430 sittings and a harmonium (1884). Pop. (1871) 530, (1881) 497, of whom 55 belonged to Blair Athole, 212 to Dull, and 230 to Moulin. —*Ord. Sur.*, sh. 55, 1869.

Tents Moor. See LEUCHARS.

Terraughtie, a mansion in Troqueer parish, Kirkcudbrightshire, 2½ miles W by S of Dumfries. It belongs to the owner of MUNCHES.

Terregles, a parish of NE Kirkcudbrightshire, containing a very small portion of the parliamentary burgh of Dumfries. It is bounded NE and E by Holywood and Dumfries in Dumfriesshire, SE and S by Troqueer, SW by Lochrutton, and NW and N by Kirkpatrick-Irongray. Its utmost length, from ENE to WSW, is 4½ miles; its utmost breadth is 2½ miles; and its area is 3868½ acres, of which 26 are water. CLUDEN Water winds 2¼ miles east-south-eastward along or close to all the north-eastern border till it falls into the river NITH, which itself curves 9½ furlongs south-by-eastward along all the Dumfries boundary; whilst CARGEN Water flows 3⅝ miles east-north-eastward and south-eastward, mainly along the Lochrutton and Troqueer boundary, but for a brief distance through the southern interior. All that part of the parish to the E of the church is low and flattish, rarely sinking much below 50 or much exceeding 100 feet above sea-level; but the western border is hilly, and, rising near Brae Croft to 692 feet, commands thence a beautiful view of the vale of the Nith, the town of Dumfries, the Solway Firth, and the distant Cumberland mountains. The rocks are variously eruptive, Silurian, and Devonian; and the soil, though diversified, is generally fertile. On Terreglestown farm, 2 miles W by N of Dumfries, stood a good-sized village, erected into a burgh of barony in 1510; and near it is a spot, the Gallows Hill, where criminals in bygone days were hanged. The chief antiquity, LINCLUDEN COLLEGE, is noticed separately; and a history of it by Mr Wm. M'Dowall was published in 1884. Sir John Herries had a charter of the lands of 'Travereglis' or Terregles from David II., on the resignation of the same by Thomas, Earl of Mar, in 1359; and his descendant, Sir Herbert Herries, was created Lord Herries of Terregles in or prior to 1489. In 1547 *his* great-granddaughter, Agnes, Lady Herries, married John Maxwell, second son of the fifth Lord Maxwell, who, in 1566, assumed the title of fourth Lord Herries, in virtue of his wife, and who is famous in history as Queen Mary's zealous adherent. According to his memoirs (Abbotsford Club, 1836), on the rout of Langside, 13 May 1568, Queen Mary 'was carried from the field by the Lords Herries, Fleming, and Livistoune. Prettie George Douglas and William the Fundlin escapt also with the Queen. She rode all night, and did not halt until she came to Sanquhir. From thence she went to Terregles, the Lord Herries' hous, where she rested some few dayes, and then, against her friends' advyce, she resolved to go to England and commit herselfe to the protection of Queen Elizabeth; in hopes, by her assistance, to be repossessed again in her kingdome. So she embarked at a creek near DUNDRENNEN, in Galloway, and carried the Lord Herries to attend her with his counsel, and landed at Cockermouth, in Cumberland. Heer she stayed, and sent the Lord Herries to Londone, in hopes to be recaved with honor.' Three relics of this brief visit are still preserved at Terregles—the Queen's illuminated Missal (1544), remains of her bed, and the silken embroidered leading-strings of James VI. John, seventh Lord Herries, in 1667 succeeded his cousin as eleventh Lord Maxwell and third Earl of Nithsdale; but in 1716 all three titles were attainted in the person of the Jacobite fifth Earl, whose escape from the Tower in woman's attire was effected by the heroism of his countess, Lady Winifred Herbert. She had buried the family muniments in the garden at Terregles ere starting on the long ride to London, in the depth of winter—a lady naturally delicate, and then advanced in pregnancy; and, after the Earl's escape, she returned, and dug up the deeds, by one of which, executed in 1712, the estates were disponed to William, the only son. His daughter and heiress, Winifred, married William Haggerston Constable, Esq. of Everingham, in Yorkshire, and built about 1789 the present spacious mansion of Terregles—an event commemorated by Robert Burns in *Nithside's Welcome Hame.* In 1814, her son, Marmaduke, disponed the lands and baronies of Terregles, Kirkgunzeon, etc., which formed great part of the ancient Herries estates, to his second son, Marmaduke; and *he,* in 1872, was succeeded by his nephew, Alfred Constable-Maxwell, Esq. (b. 1841), who holds 15,803 acres in the stewartry, valued at £14,622 per annum, and who is thirteenth in lineal descent from the first Lord Herries. The family has always adhered to the Catholic faith; and on 14 Nov. 1879, the interesting 'queir' or choir of Terregles, which was founded by the fourth Lord Herries not long before his death in 1583, and which contains the tombs of himself and his descendants, was reopened by the bishop of Galloway after a thorough four years' restoration at the cost of the present proprietor. There are 8 lesser landowners in the parish, 1 holding an annual value of more than £500, 4 each of between £100 and £500, 1 of from £50 to £100, and 2 of from £20 to £50. Terregles is in the presbytery and synod of Dumfries; the living is worth £210. The parish church is a poor building of 1799, and contains nearly 300 sittings. The public school, with accommodation for 60 children, had (1884) an average attendance of 57, and a grant of £49, 3s. Valuation (1860) £4770, (1885) £7660, 4s. 10d. Pop. (1801) 510, (1831) 606, (1861) 580, (1871) 547, (1881) 471, of whom 8 were in the parliamentary burgh of Dumfries.—*Ord. Sur.*, sh. 9, 1863. See Dr William Fraser's *Book of Caerlaverock* (2 vols., Edinb. 1873).

Tertowie House, a modern mansion in Kinellar parish, Aberdeenshire, 6 miles SSE of Kintore.

Teviot, a river of Roxburghshire, formed at Geddingscleuch, 700 feet above sea-level and 12½ miles SW of Hawick, by head-streams that rise at an altitude of from 1200 to 1300 feet close to the Dumfriesshire border. Thence it runs 37¼ miles north-eastward till it falls into the Tweed at Kelso. Its chief tributaries are, on the left bank, Hislop Burn, Borthwick Water, and Ale Water; and on the right bank, Frostley Burn and Allan, Slitrig, Rule, Jed, and Kale Waters. The parishes which it bounds or traverses are Teviothead, Hawick, Wilton, Cavers, Minto, Bedrule, Ancrum, Jedburgh, Crailing, Eckford, Roxburgh, and Kelso. The towns or villages on or near its banks are Hawick, Denholm, Ancrum, Crailing, Eckford, Heiton, Roxburgh, and Kelso. Its scenery is everywhere pleasant, often brilliant, and sometimes even superb. Its immediate banks are, for the most part, a charming alternation of rich haugh and variegated, often abrupt, rising ground. Its basin is, for some distance, a comparatively narrow vale, flanked with bold green heights; for a greater distance it is a strip of alluvial plain, screened by terraced but undulating and tumulated dale, and overhung at from 3 to 8 miles' distance by terminating heights; and, in the lower course, it is a richly variegated champaign country, possessing all the luxuriance without any of the tameness of a fertile plain, and stretching away in exulting loveliness to the picturesque Eildons on the one hand, and the dome-like Cheviots on the other. Its upper parts abound in fastnesses, both natural and artificial, which figured constantly and fiercely in the old Border raids. The trout fishing is capital, especially over the lower 5 or 6 miles; and the salmon fishing is very fair.—*Ord. Sur.*, shs. 16, 17, 25, 1864-65.

Teviotbank, a handsome modern Elizabethan mansion in Minto parish, Roxburghshire, near the left bank of the Teviot, 5 miles NE of Hawick. Purchased by him in 1860, it is now the property of Edward Heron-Maxwell, Esq. (b. 1821), who holds 295 acres

in the shire, valued at £500 per annum.—*Ord. Sur.*, sh. 17, 1864.

Teviotdale. See TEVIOT and ROXBURGHSHIRE.

Teviothead, a parish of SW Roxburghshire, whose church stands near the right bank of the Teviot, 14 miles N by E of Langholm and 9 SW of Hawick, under which there is a post office. Formed in 1850 out of Hawick and Cavers parishes, it is bounded NE by Hawick, E by Kirkton and Cavers, SE by Castleton, S and SW by Ewes, Westerkirk, and Eskdalemuir in Dumfriesshire, and NW and N by Roberton. Its utmost length, from NE to SW, is 10¾ miles; its breadth varies between 3¼ and 7¼ miles; and its area is nearly 49⅛ square miles or 31,559½ acres, of which 101 are water. The TEVIOT, formed at Geddingscleuch, 700 feet above sea-level, by head-streams that rise at an altitude of from 1200 to 1300 feet close to the Dumfriesshire border, winds 9¼ miles north-east-by-eastward, for the last 3¼ furlongs along the Hawick boundary, till it passes off into Hawick at Raesknowe. ALLAN Water, formed by Priesthaugh and Skelfhill Burns, runs 5 miles north-north-eastward and north-north-westward, for the last 2⅞ miles along the Kirkton and Hawick boundary, till it falls into the Teviot at the northern extremity of the parish; and, with its affluent, the Dod Burn, supplies the town of HAWICK with water. The surface, sinking to 490 feet above sea-level at the Allan's influx to the Teviot, is everywhere hilly, chief elevations to the NW of the Teviot, as one goes up the vale, being Swansteads Hill (1093 feet), *Calfshaw Head (1320), Blackcleuch (1050), and *Stock Hill (1561); to the SE, Broadhaugh Hill (913), Skelfhill Pen (1745), *CAULDCLEUCH Head (1996), *Tudhope Hill (1961), and *Wisp Hill (1950), where asterisks mark those summits that culminate on the confines of the parish. The rocks are chiefly Silurian; and the soil of the arable lands is mostly gravelly. The road from Hawick to Langholm runs 8 miles through the parish—for 4⅝ miles up the vale of the Teviot as far as the church, and then for 3⅝ miles up the narrower glen of Frostley Burn to disused Mosspaul inn at the EWES boundary. Up this road, on 23 Sept. 1803, drove Wordsworth and his sister Dorothy, who writes in her Journal that 'the quantity of arable land gradually diminishes, and the plantations become fewer, till at last the river flows open to the sun, mostly through unfenced and untilled grounds, a soft pastoral district, both the hills and the valley being scattered over with sheep. Here and there was a single farm-house, or cluster of houses, and near them a portion of land covered with ripe corn. Towards the head of the vale of Teviot, where that stream is but a small rivulet, we entered another valley. Hereabouts Mr Walter Scott had directed us to look about for some old stumps of trees, said to be the place where Johnnie Armstrong was hanged; but we could not find them out. [See CAERLANRIG.] The valley which we were ascending, though, for aught I know, it is unnamed in song, was to us more interesting than the Teviot itself. Not a spot of tilled ground was there to break in upon its pastoral simplicity; the same soft yellow green spread from the bed of the streamlet to the hill-tops on each side, and sheep were feeding everywhere. It was more close and simple than the upper end of the vale of Teviot, the valley being much narrower, and the hills equally high and not broken into parts, but on each side a long range. The grass, as we had first seen near Crawfordjohn, had been mown in the different places of the open ground, where it might chance to be best; but there was no part of the surface that looked perfectly barren as in those tracts. We saw a single stone house a long way before us, which we conjectured to be, as it proved, Mosspaul, the inn where we were to bait.' Teviothead Cottage was long the home of the poet, the Rev. Henry Scott Riddell (1798-1870); and a spot overlooking it is crowned with a large cairn to his memory. The principal proprietors are the Duke of Buccleuch, Sir W. Eliott, Bart., of Stobs, and five others. Teviothead is in the presbytery of Jedburgh and the synod of Merse and Teviotdale; the living is worth £300. The church was built by the late Duke of Buccleuch in 1856, and contains 320 sittings. Teviothead public and Allanwater schools, with respective accommodation for 93 and 38 children, had (1884) an average attendance of 43 and 19, and grants of £53, 1s. 6d. and £33, 3s. 6d. Valuation (1864) £8805, 10s. 6d., (1885) £10,163, 13s. 4d. Pop. (1861) 438, (1871) 515, (1881) 486.—*Ord. Sur.*, shs. 17, 16, 1864.

Texa, an islet, 152 acres in area, off the SE coast of Islay island, Argyllshire, 2 miles ESE of Port-Ellen.

Thainston, a seat of the Forbes-Mitchells, in Kintore parish, Aberdeenshire, 2¼ miles NNW of Kintore town. It is a handsome edifice, in a charming situation, with a very extensive view; and succeeded a previous mansion which was plundered and burnt by the rebels in 1745.—*Ord. Sur.*, sh. 76, 1874.

Thankerton. See COVINGTON.

Thief's Road. See PEEBLESSHIRE.

Thirdpart, an estate in Kilrenny parish, E Fife, 1½ mile WSW of Crail. Its owner, Philip George Anstruther, Esq. (b. 1875; suc. 1884), holds 1433 acres in the shire, valued at £3502 per annum.—*Ord. Sur.*, sh. 41, 1857.

Thirlestane Castle, a modern mansion, the seat of Lord Napier and Ettrick, in Ettrick parish, Selkirkshire, beautifully situated, amid extensive plantations, near the left bank of Ettrick Water, 17 miles SW of Selkirk. Immediately behind it is a ruined tower, the stronghold of that Sir John Scott of Thirlestane whom James V. in 1542 pronounced 'Ready, aye ready' for battle. His descendant, Sir William Scott, Bart., in 1699 married Elizabeth, Mistress of Napier, the great-great-granddaughter of the famous inventor of logarithms, John Napier of Merchiston (1550-1617), whose son, Sir Archibald, was created Baron Napier of Merchiston in 1627. The fifth descendant of this marriage, Francis Napier, present and ninth Lord Napier (b. 1819; suc. 1834), filled various high diplomatic stations from 1840 to 1865, and was Governor of Madras from 1866 to 1870, when he was created Baron Ettrick in the peerage of the United Kingdom. He holds 6988 acres in the shire, valued at £2067 per annum.—*Ord. Sur.*, sh. 16, 1864.

Thirlestane Castle, the seat of the Earl of Lauderdale, in Lauder parish, Berwickshire, on the right bank of Leader Water, 3 furlongs NE of Lauder town. Originally a strong tower called Lauder Fort, built by Edward I. during his invasion of Scotland, it was renovated or rebuilt by Chancellor Maitland, and acquired from the Duke of Lauderdale a new front and wings, together with great interior improvements. It now is a massive and stately pile, partly ancient and partly modern, whose decorations are mainly in the style of Charles II.'s reign. Sir Richard de Maitland was lord of Thirlestane in the latter half of the 13th century, and among his descendants were the blind poet, Sir Richard Maitland of LETHINGTON (1496-1586); William Maitland, Secretary Lethington (1525-73), the 'Chameleon;' Sir John or Chancellor Maitland (1537-95), created Lord Maitland of Thirlestane in 1590; John, second Lord Maitland (d. 1645), created Earl of Lauderdale in 1624; John, second Earl (1616-82), created Duke of Lauderdale in 1672, of Cabal fame; and Charles, twelfth Earl (1822-84), who was killed by lightning whilst grouse-shooting near Lauder, and who held 25,512 acres, valued at £17,320 per annum. The title is now claimed by Major Henry Maitland (b. 1840), who is third in descent from the fourth son of the sixth Earl, and by Sir James Gibson-Maitland, Bart., of SAUCHIE (b. 1848), who is fourth in descent from his fifth son.—*Ord. Sur.*, sh. 25, 1865.

Thomaston, a ruined castle in Kirkoswald parish, Ayrshire, 4½ miles W by S of Maybole. It is said to have been founded by a nephew of Robert Bruce in 1335.

Thom, Loch. See INNERKIP.

Thorn. See JOHNSTONE, Renfrewshire.

Thornhill, a village in the detached section of Kincardine parish, Perthshire, 4 miles WSW of Doune and 9¼ WNW of Stirling. It has a post office under Stirling, with money order, savings' bank, and tele-

graph departments, two inns, NORRISTON Established and Free churches, a public school, and fairs on the first Tuesday of January and the second Tuesday of March. Pop. (1861) 621, (1871) 498, (1881) 474.—*Ord. Sur.*, sh. 39, 1869.

Thornhill, a village in Morton parish, Nithsdale, Dumfriesshire. It stands, 225 feet above sea-level, within ½ mile of the Nith's left bank, and by road is 65 miles SSW of Edinburgh, 66 SSE of Glasgow, and 1 mile SW of Thornhill station on the Glasgow and South-Western railway (1850), this being 14¼ miles NNW of Dumfries and 28¼ SE of Cumnock. Crowning a terrace or rising ground, it commands a magnificent view, and chiefly consists of a spacious main street, ½ mile long, which is planted with limetrees, and sends off three shorter streets at right angles. In the centre is a neat stone pillar or cross (1714), surmounted by a Pegasus and the Queensberry arms. On 19 Aug. 1803 Coleridge, Wordsworth, and his sister Dorothy 'passed through the village of Thornhill, built by the Duke of Queensberry, the "brother-houses" so small that they might have been built to stamp a character of insolent pride on his own huge mansion of DRUMLANRIG, which is full in view on the opposite side of the Nith.' But the late Duke of Buccleuch effected striking improvements in 1833 and after years; and Thornhill now has a post office, with money order, savings' bank, and telegraph departments, branches of the British Linen Co. and Union Banks, a local savings' bank (1843), two good hotels, gas works (1841), water and drainage works (1867), a brewery, a bowling green (1832), a masonic lodge (1814) with a handsome hall (1834), the Nithsdale Agricultural Society (1827), small debt courts on the second Thursday of April, August, and Dec., and fairs on the second Tuesday of Feb., May, August, and Nov. *o. s.*, and the last Friday of June, besides cattle and flower shows on the third Tuesday of Sept. Dr Grierson's Museum (1869-72) of natural history and antiquities is specially interesting for its relics of Burns. The parish church, ¼ mile NE, is a handsome Norman edifice of 1841, built at a cost of £3554, and containing 1200 sittings. There are also a U.P. church (1816; 480 sittings) and an Evangelical Union chapel (1874; 312). Joseph Thomson, the African explorer, was born at Thornhill in 1858. Pop. (1779) 325, (1791) 430, (1831) 1373, (1861) 1450, (1871) 1349, (1881) 1289, of whom 685 were females. Houses (1881) 259 inhabited, 14 vacant, 1 building.—*Ord. Sur.*, sh. 9, 1863. See Dr C. T. Ramage's *Drumlanrig Castle and Morton* (Dumf. 1876).

Thornilee. See INNERLEITHEN.

Thornliebank, a manufacturing village in Eastwood parish, Renfrewshire, on Auldhouse Burn, 1½ mile SSW of Pollokshaws. It has a post office under Glasgow, with money order, savings' bank, and telegraph departments, a railway station (1881) on the Caledonian, a U.P. church (1836; renovated 1883), a public school (1878), and a public hall (1879), erected by the Messrs Crum at a cost of £4000. That firm's extensive works, for cotton-spinning, power-loom weaving, calico-printing, and bleaching, were commenced towards the close of the 18th century. The mansion of Thornliebank is the seat of Alex. Crum, Esq. (b. 1828; suc. 1867), Liberal M.P. for Renfrewshire since 1880. Pop. (1841) 1620, (1861) 1839, (1871) 2123, (1881) 2156, of whom 1069 were females. Houses (1881) 404.—*Ord. Sur.*, sh. 30, 1866.

Thornton, a village in the S of Markinch parish, Fife, near the left bank of the Ore, and 5 furlongs W by S of Thornton Junction on the North British railway, this being 15¼ miles ENE of Dunfermline, 20 N by E of Edinburgh, and 8¼ S of Ladybank Junction. It has a post office under Kirkcaldy, a public school, and an Established church, raised to *quoad sacra* parochial status in 1878. Pop. of village (1861) 527, (1871) 526, (1881) 552; of *q. s.* parish (1881) 909, of whom 70 were in Kinglassie and 839 in Markinch.—*Ord. Sur.*, sh. 40, 1867.

Thornton, a place, with an hotel, in Grange parish, Banffshire, 4 miles E by N of Keith, under which it has a post office.

Thornton Castle, a mansion in Marykirk parish, Kincardineshire, near the right bank of the Black Burn, 3 miles W of Laurencekirk. An ancient Scottish Baronial edifice, bearing date 1531, but supposed to be partly much earlier, it was repaired about 1822, and greatly improved about 1846. John Strachan, knighted in 1375, obtained from his father the lands of Thornton; and Alexander Strachan of Thornton was created a baronet in 1625. The sixth baronet was Admiral Sir Richard Strachan, G.C.B. (1760-1828), distinguished for his naval services. Alex. Crombie, a successful and much-esteemed advocate and land agent in Aberdeen, acquired the property in 1804. He was succeeded by his cousin, the Rev. Alex. Crombie, LL.D., F.R.S. (1760-1840), the author of several well-known works; and *his* grandson, Alex. Crombie, Esq., W.S. (b. 1836; suc. 1877), holds 2300 acres in the shire, valued at £2632 per annum.—*Ord. Sur.*, sh. 57, 1868.

Thornton Hall, a station on the East Kilbride railway, 7⅓ furlongs SSE of Busby station.

Thorntoun House, a mansion in Kilmaurs parish, Ayrshire, 3¼ miles W of Kilmarnock.

Threave Castle, a fine ruin in Balmaghie parish, Kirkcudbrightshire, on an islet formed by the river Dee, 1½ mile W of Castle-Douglas. A tall, square, battlemented tower, massive but roofless, it is surrounded by remains of a strong outer wall, with circular towers at the four angles. It was built by Archibald, 'the Grim,' third Earl of Douglas, towards the close of the 14th century on the site of a fortalice of Alan, the last native lord of GALLOWAY; and William, eighth Earl of Douglas, kept here in 1451 a retinue of more than a thousand armed men. Threave was the scene in 1452 of the murder of Sir Patrick Maclellan, the tutor of Bombie; and in 1455 it was the last of the Douglas fortresses to surrender to James II., who employed 'Mons Meg' against it. (See DOUGLAS CASTLE, EDINBURGH, and KELTON.) After the fall of the Douglases, the castle went into the possession of the Crown; but it was afterwards transferred to the family of Maxwell, who became Earls of Nithsdale and hereditary keepers of Threave and stewards of Kirkcudbright. During the troubles of Charles I. the Earl of Nithsdale, at his own expense, held this castle for the King, and armed, paid, and victualled a garrison of 80 men; nor did he flinch, till the king, unable to send him any assistance, instructed him to obtain the best conditions he could for himself and his garrison. The Earls, as keepers of the castle, received from each parish of Kirkcudbrightshire 'a lardner mart cow,' or a fattened cow in condition to be killed and salted at Martinmas for winter provision; and, in 1704, when they sold the circumjacent estate, they, for the sake of this perquisite, retained the castle itself. In 1716, at the attainder of the fifth Earl, the levy of the 'lardner mart cow' fell into desuetude; and, in 1747, at the abolition of hereditary jurisdictions, the last vestiges of the ancient power and importance of the castle disappeared. Threave House, on Kelton Hill, 1½ mile S of Castle-Douglas, is a Scottish Baronial edifice of 1873, the seat of William Gordon, Esq., who acquired the estate of Threave in 1870, and who holds 1469 acres in the shire, valued at £2025 per annum.—*Ord. Sur.*, sh. 5, 1857.

Thrumster House, a mansion in Wick parish, Caithness, 4¼ miles SSW of the town. Its owner, Mrs Bentley-Innes (suc. 1854), holds 7400 acres in the shire, valued at £1932 per annum.—*Ord. Sur.*, sh. 110, 1877.

Thurso (old form, Thorsa; Scand. *Thors-a*, 'Thor's river'), a parish, containing a town of the same name, and also a river, in the extreme NE of Caithness. The parish is bounded N by the Atlantic, E by the parishes of Olrig and Bower, S and SW by the parish of Halkirk, and W by S by the parish of Reay. The boundary is formed for 2¼ miles on the SW by the river Thurso, for 3¾ miles on the W by S by Forss Water, and elsewhere, except on the N, it is artificial. The greatest length, from NW at Brims Ness to SE, at the point where the parishes of Thurso Bower, and Halkirk meet on the SE side of Sordale Hill, is 10 miles; the greatest width at right angles to this, from Clardon Head to the SW boundary, W of Buckies Hill, is 6 miles; and the area

is 28,767·127 acres, of which 368·809 are water, 329·304 are foreshore, and 20·207 are tidal water, while 6860·073 acres are in a detached portion of the parish 4¼ miles SW of the main portion, and running 5¼ miles SW from the S end of the Dorery Hills, with an average breadth of 1½ mile. The whole surface of the parish is considerably above sea-level, rising from the sea in the N in sheer cliffs, with an average height of over 200 feet, or in high steep banks. From these a moory plateau passes southward by Brims Hill (300), Holburn Hill (306), Hill of Forss (400), and Cairnmore Hillock (439), and then undulates towards the river Thurso, which has high steep banks on both sides. To the E of the river there is again a rise to Duncan's Hill (216) and Sordale Hill (300), the last in the extreme SE of the parish, and with Buckies Hill (310) to the W on the opposite side of the river. About half the whole area is under tillage, but the greater part of the soil is poor, and of the other half a considerable moiety is barren heathland. The coast, from near the NW corner of the parish at Brims Ness, has a general N and S direction for 4¼ miles to Holburn Head, whence it turns southward to Scrabster lighthouse, then curves WSW to Scrabster itself, and thence SE, E, and NE to Clardon Head, forming by this sweep Thurso Bay,* the portion of which to the W is the well-known anchorage of Scrabster Roads. The Bay is 2¾ miles wide across the entrance from Holburn Head east-south-eastward to Clardon Head, and 1½ mile deep west-south-westward, at right angles to this line, to the extreme S at the town of Thurso. To the E of Clardon Head is Murkle Bay. The rocks of the parish are fissile beds belonging to the Old Red Sandstone system, some of which, at Weydale, Forss, and elsewhere, are quarried for the Caithness flags or Caithness pavement, so well known for its smooth surface and its durability. Many of the beds are highly fossiliferous, and those in the neighbourhood of the town of Thurso yielded the fine specimens of *Asterolepis* now in the Hugh Miller and John Miller Collections in the Industrial Museum at Edinburgh. One thin bed, a short distance W of Holburn Head, contains the scarce little crustacean, *Estheria membranacea*. The drainage is carried off by the river Thurso, which, after tracing part of the south-western boundary, as already described, has a course of 5 miles through the parish, till it falls into the S corner of inner Thurso Bay. The only lake of any size is Loch Cailam or Chaluim (5 × 4 furl. ; 435 feet) in the detached portion of the parish. The mansions are Forss House, Scrabster House, and Thurso Castle. The last, to the E of the mouth of the river Thurso, is a large and rather staring structure of 1872-78, in a somewhat poor variety of the Baronial style. The height of its main tower is 147 feet. Its predecessor, erected in 1660 by George, Earl of Caithness, was the birthplace and residence of the famous Sir John Sinclair (1754-1835), to whom Scotland owes the *Old Statistical Account*, and also of his daughter, Miss Catherine Sinclair (1801-64). His grandson, Sir John-George-Tollemache Sinclair of Ulbster, third Bart. since 1786 (b. 1825 ; suc. 1868), has been Liberal member for Caithness since 1869, and holds 78,053 acres in the shire, valued at £14,212 per annum. A short distance E of the castle is Harold's Tower, erected by Sir John Sinclair to mark the supposed grave of Harald, grandson of Rögnvald, who was defeated by Harald Maddadson in this neighbourhood in 1196. Near the centre of Scrabster Bay are the ruined remains of the old castle of the Bishops of Caithness, occupying the site of the 'borg' which Harald Maddadson destroyed when he captured Bishop John of Caithness and the principal men of the district in 1201. The neighbourhood was also the scene of an earlier battle in 1040, when Moddan, nephew of King Duncan, was surprised and slain in or about the town by Thorkell Fostri and his Norsemen, and thereafter Thorkell's victorious army proceeded to join Thorfinn and take part in the great battle in Moray that preceded Duncan's death. There are some traces of a camp at Holburn Head, and remains of Picts' houses or weems at Sordale, Balliemore, Cairnmore, Scrabster Hill, and elsewhere. A little to the W of Holburn Head is a small obelisk called Slater's Monument, erected in memory of Captain M. A. Slater of the Coast Survey, who is supposed to have been thrown from his horse over the cliff close at hand. The parish is in the presbytery of Caithness and the synod of Sutherland and Caithness, and the living is worth £433 a year. The churches are noticed in connection with the town. Seven schools, with total accommodation for 1082 pupils, had (1884) an average attendance of 622, and grants amounting to £534. Thurso unites with Bower, Cannisbay, Dunnet, Halkirk, Olrig, Reay, and Watten to form Thurso poor-law combination, with a poorhouse having accommodation for 149 inmates. The cemetery is on a high bank overlooking the river Thurso, fully ½ mile S of the town. It contains a monument to Robert Dick (1811-66), the famous scientific baker of Thurso, whose story has been told by Dr Smiles in *Robert Dick, Geologist and Botanist* (1878). The Georgemas and Thurso branch of the Highland Railway passes NW through the parish to the town, and near it are two main roads from Wick to Thurso. Another road goes westward to Reay, and there are a number of good district roads. The principal proprietor is Sir J. G. T. Sinclair, Bart., of Ulbster, and 5 others hold each an annual value of £500 or upwards, 6 hold each between £500 and £100, 16 hold each between £100 and £50, and there are a considerable number with smaller amounts. Valuation (1860) £14,740, (1885) £26,707, 15s., including £918 for the railway. Pop. (1801) 3628, (1831) 4679, (1861) 5561, (1871) 5754, (1881) 6217, of whom 2939 were males and 3278 females, while 4026 were in the police burgh. Houses (1881) 1418.—*Ord. Sur.*, shs. 116, 115, 1878.

The River Thurso rises near the extreme SW end of the parish of Halkirk among the hills that there form the boundary between Sutherland and Caithness, and flows first NE, and then N, through the centre of the parish of Halkirk, and thereafter near the centre of the parish of Thurso to the sea at the S side of Thurso Bay. The whole length of the course is about 27 miles, of which 19½ are in Halkirk and 7½ in Thurso. The hollow through which it flows in the upper part of its course from SW to NE is called Strath More, and near the centre of it is Loch More. At the point where the stream turns N it receives from Strath Bheag a tributary which drains the northern part of the parish of Latheron, and 5½ miles farther down another joins it from the W, from Loch Calder. The other affluents are neither numerous nor important. The fishing is good, particularly in early spring. There is almost no wood along its course, but the high banks between which the river often runs are by no means devoid of beauty. The boulder clay along them contains at several points comminuted shells.

The Town of Thurso stands on the W bank of the river at the mouth, and has a station at the northern terminus of the Sutherland and Caithness section (1874) of the Highland railway. It is by rail 20¾ miles NW of Wick, 154 NNE of Inverness, and 298 N of Perth. By sea it is 25 miles SSW of Stromness, and 30½ SW of Scapa pier, and by road 21 miles from Wick and 44 ENE of Tongue. It seems to have become an important resort of the Norsemen at a very early date, and it soon became the great centre of trade between Scotland and Norway, Sweden and Denmark. In 1633 it was created a burgh of barony, a status which it still holds, though it is now also a police burgh, the General Police and Improvement Act having been adopted. The superior is Sir J. G. T. Sinclair of Ulbster. For nearly two hundred years after 1633 it was practically the county town of Caithness, the sheriff courts being held and all the ordinary law business of the county

* The name is sometimes more widely applied to the whole sweep bounded on the NW by Holburn Head and on the E by Dunnet Head; and embracing on the SE the great sweep of Dunnet Bay. This opening measures 7 miles across the mouth from Holburn Head NE to Dunnet Head, 7½ from Dunnet Head SW to the town of Thurso, and 7 from Holburn Head E by S to Dunnet Sands.

transacted there. The superior and magistrates of Wick having, however, raised an action to show that their rights were being usurped, obtained a decree of the Court of Session in their favour in 1828, and the legal business was then removed to Wick. The old part of the town occupies a triangular piece of ground between the bay and the river, and is irregularly built; but the newer part to the SW is regularly laid out, though it has not yet developed into the large place it was designed to be. Near the centre of the town is Macdonald Square, in which is a small public garden, originally the private property of the Sinclair family, but presented to the town by Sir John Sinclair in 1876. In the centre is a statue of Sir John Sinclair of *Old Statistical Account* celebrity, originally erected at Thurso Castle in 1835, but removed to its present position in 1856. The ground was formerly somewhat bare and neglected, but it was laid out and ornamented in 1882-83 at an expense of £213 raised by public subscription. A promenade was formed at the links in 1882. It is over 300 yards long, and the expense of construction was defrayed by the public. The sands to the N of the town form excellent bathing ground. The principal street is Princes Street, formerly High Street, the name having been changed after the visit paid to the town by the Prince and Princess of Wales in October 1876, when His Royal Highness opened an Art and Industrial Exhibition in the Town Hall. The Town Hall, a good Gothic building in Princes Street, contains a courtroom, a public library, and a museum on the ground floor, and on the upper floor a public hall 56 feet 6 inches long, 40 feet wide, and 30 high. It was erected in 1870 at a cost of £2500, obtained partly by public subscription and partly from the proceeds of a bequest of £1000 made by Mr Alexander Henderson several years before. The centre window over the doorway is of stained glass, and shows St Peter—the patron saint of the town—and the arms of Mr Henderson and of Sinclair of Ulbster. The museum contains part of the collections made by the late Robert Dick. The library is carried on under the Public Libraries Act, which was adopted in 1872. The parish church, erected in 1832, after designs by Burns, at a cost of £6000, is a good building, with a tower 140 feet high and a clock, the latter the gift of Mr Henry Miller, London. There are 1540 sittings. Near the river are the roofless walls of the old church of St Peter, believed to date from the 14th century, and surrounded by the old burying-ground. There are two Free churches, the First and the West, of which the latter is a handsome building of 1860 with a good spire. The Congregational church, erected in 1875-76 at a cost of £1100, replaced an old church dating from 1799. There is also an Original Secession church. There is a public school, an institution in Sinclair Street endowed by Mr Alexander Miller for the education of boys, a benevolent institution for girls in Olrig Street, and a Free Church school. The Dunbar Hospital originated in a bequest by Mr Alexander Dunbar, Scrabster, who died in 1859. The foundation stone of the building was laid by the Duke of Edinburgh in 1882. There is regular railway communication with the south, and the mail steamer sails between Orkney and Scrabster daily. There is a small harbour at the mouth of the river, ranking as a creek under Wick, but it is neither convenient nor safe. The principal exports are grain and paving-stone. The harbour or rather roadstead and pier at Scrabster are separately noticed. The only industry of any importance is in connection with the trade in Caithness flags, the sawing, dressing, and polishing of which is carried on by four companies; and there is good fishing in Dunnet Bay. Thurso has a head post office, with money order, savings' bank, insurance, annuity, and telegraph departments; branch offices of the Bank of Scotland, British Linen Company, Commercial, National, and Town and County Banks; a branch of the National Security Savings' Bank; agencies of 27 insurance companies; a newspaper, the Independent *Caithness Courier* (1866), published every Friday; a rifle hall, with a public reading-room; and several good hotels. Gas is supplied by a private company, and new gasworks were erected in 1880. There is a weekly market on Friday, and there are fairs on the second Tuesday of July (Petermass), and the Fridays in August and September after Dunnet. Sheriff small debt courts are held ten times a year, *i.e.*, once every five weeks, on Thursdays; and justice of peace small debt courts are held every second Wednesday. Pop. of town (1841) 2510, (1861) 3426, (1871) 3622, (1881) 4026, of whom 1827 were males and 2199 females. Houses (1881) 995 occupied, 34 unoccupied, and 16 being built.

Thurston, a plain two-story mansion in Innerwick parish, Haddingtonshire, near the right bank of the Dry Burn, 5 miles SE of Dunbar.

Tibbermore, a parish of Perthshire, containing Almondbank station, Huntingtower and Ruthvenfield village, and a small portion of the parliamentary burgh of Perth. It is bounded N by Methven and Redgorton, E by Scone and Perth, S by Aberdalgie and Forteviot, and W by Findo-Gask. Its utmost length, from ENE to WSW, is 6½ miles; its breadth varies between 6½ furlongs and 2½ miles; and its area is 6170 acres, of which 30 are water. The Almond winds 2⅝ miles east-north-eastward along all the Redgorton border, till it falls into the Tay, which itself flows ¼ mile south-eastward along all the boundary with Scone. Beside the Almond the surface declines to less than 50 feet above sea-level; and thence it rises to 223 feet near Hillyland, 257 near Hill of Ruthven, and 467 near the Forteviot border. Thus, without being hilly, the parish is considerably diversified. In the western district it descends in a gentle slope to the N, and terminates in a narrow tract of level ground; and in the eastern district it in general lies somewhat high above the Almond, and then, going down in a steep descent, forms a delightful plain along the margin of the stream. The district is in general fertile; and to a large extent, especially on the E and S, is beautified with wood. The arable grounds, comprising nine-tenths of the entire area, have a various soil—a sandy loam along the Almond, an argillaceous earth toward Perth, and a reclaimed substratum of moss in many parts of the W. Old Red Sandstane is the prevailing rock, and has been largely quarried. At Letham, 2 miles WNW of Perth, a new mansion was built about 1880. The chief objects of antiquity and the chief manufactures have been noticed under Huntingtower. Tibbermore or Tippermuir, though containing less of the battlefield than Aberdalgie, has given name to the first battle fought between the Marquis of Montrose and the Covenanters (1 Sept. 1644)—a battle in which the latter confronted 1700 Highlanders and Irishmen with 6000 foot and 600 horse, but were completely vanquished, and suffered a loss of 2000 slain and 2000 captured. Tibbermore was the residence of several of the bishops of Dunkeld, particularly of Bishops Geoffrey and Sinclair, who died in 1249 and 1337. Bishop Sinclair is noted in history for an exploit against the English in the reign of Robert Bruce. The earliest parish church of Tibbermore was originally a chapel dedicated to St Serf or Servanus, and situated on the N side of the Almond, within the present boundaries of Redgorton. At Tullilum, in the E end of Tibbermore, anciently stood a convent of Carmelites; and beside it Richard Inverkeithing, Bishop of Dunkeld, built, in 1262, a chapel and a house. Here the synods of Dunkeld diocese were held till 1460, when they were removed by Bishop Thomas Lauder to his own cathedral. Alexander Young was the last prior of the convent; and, on his embracing the Protestant religion at the Reformation, he became minister of Tibbermore. The name Tibbermore signifies 'a great well,' and probably alludes to a perennial spring which issued from behind the church, and was long known by the name of the 'Lady Well,' but which, not long before 1843, was destroyed by the draining of the adjacent field. The father of Principal Tulloch was minister from 1833 to 1844. The Earl of Kinnoull owns about three-fifths of the parish, 5 lesser proprietors holding each an annual value of £500 and upwards, and 7 of between £100 and £500. Giving off a small portion to

the *quoad sacra* parish of St Leonard, Tibbermore is in the presbytery of Perth and the synod of Perth and Stirling; the living is worth £304. The parish church, 2 miles SW of Almondbank station, is a pre-Reformation building; and the dates 1632 and 1808 on the belfry—which is a curious structure, much admired by some ecclesiologists—are those of repairs, and not of its erection. As enlarged by a N aisle in 1810, it contains 600 sittings. Two public schools, Ruthvenfield and Tibbermore, with respective accommodation for 218 and 153 children, had (1884) an average attendance of 74 and 65, and grants of £61, 18s. and £57, 17s. 6d. Valuation (1865) £9810, (1885) £11,617, 17s. 11d. Pop. (1801) 1306, (1831) 1223, (1841) 1651, (1861) 1296, (1871) 1563, (1881) 1883, of whom 752 were in the parliamentary burgh of Perth, and 1832 in the ecclesiastical parish.—*Ord. Sur.*, sh. 48, 1868.

Tibbers, an ancient castle adjacent to the mutual boundary of Penpont and Durisdeer parishes, Dumfriesshire, at the influx of Park Burn to the river Nith, opposite Carronbridge and 2¼ miles NNW of Thornhill. Supposed to have been built by the Romans, and named in honour of Tiberius Cæsar, it was garrisoned by the English in the early part of the Wars of the Succession, and surprised and captured by Sir William Wallace; and it is now represented by only slight vestiges.—*Ord. Sur.*, sh. 9, 1863.

Tibbie Shiels. See St Mary's Loch.

Tifty. See Fyvie.

Tighnabruaich (Gael. 'house on the edge of the bank'), a recent watering-place in Kilfinan parish, Argyllshire, on the Kyles of Bute, 2¼ miles SW of the mouth of Loch Riddon and 9½ (by water) NW of Rothesay. It has a post office under Greenock, with money order, savings' bank, and telegraph departments, a branch of the Royal Bank, 2 hotels, a steamboat pier, an Established church (made *quoad sacra* in 1882), a Free church, and a new public school. Pop. (1871) 404, (1881) 771.—*Ord. Sur.*, sh. 29, 1873.

Tillery House. See Foveran.

Tillichewan Castle. See Bonhill.

Tillicoultry, a town and a parish of Clackmannanshire. The town lies at the southern base of the Ochils, on Tillicoultry Burn, and within ½ mile of the right bank of the Devon, 2 miles E of Alva, 3¾ NNE of Alloa, 3⅝ W by S of Dollar; whilst its station, on the Devon Valley section (1851-71) of the North British railway, is 10 miles ENE of Stirling, and 13½ WSW of Kinross. The Queen, who passed it by train on 20 June 1879, just after receiving the news of the death of the Prince Imperial, describes its 'situation, in a wooded green valley at the foot of the hills,' as 'beautiful, reminding me of Italy and Switzerland.' In the course of the last half century, Tillicoultry has grown from a village to a thriving town, such growth being due to the great extension of its woollen manufactures. These date, indeed, from the days of Queen Mary, and long made Tillicoultry serges and blankets famous throughout Scotland; but the weaving of tartans and shawls was not introduced till 1824, and the manufacture of tweeds and silk fabrics is of still later origin. There now are no fewer than eighteen factories; and the larger of these employ several hundreds of hands. The town has a post office, with money order, savings' bank, and telegraph departments, branches of the Clydesdale and Union Banks, 2 hotels, gasworks, a police station, a cemetery, and a Wednesday Liberal paper, the *Tillicoultry News* (1879). The Popular Institute and Library, with accommodation for 1000 people, was erected in 1860; in 1862 an Academy was gifted to the townsfolk by David Paton, Esq., at a cost of nearly £1200; and in 1875 handsome board schools were built at a cost of £5500. The parish church (1829; 650 sittings) stands 4½ furlongs E by S of the centre of the town. The Free church was built soon after the Disruption; and other places of worship are the U.P., the Evangelical Union, and the Congregational church, the last erected in 1876 at a cost of £3000. The town, having in 1871 adopted part of the General Police and Improvement (Scot.) Act of 1862, is governed by nine police commissioners. Its municipal constituency numbered 550 in 1885, when the annual value of real property within the burgh amounted to £10,000, whilst the revenue, including assessments, was £550. Pop. of town (1851) 3217, (1861) 3684, (1871) 3745, (1881) 3732, of whom 1999 were females. Houses (1881) 847 inhabited, 80 vacant.

The parish, containing also the villages of Coalsnaughton and Devonside, is bounded N and NE by Blackford in Perthshire, E by Dollar, S by Clackmannan and Alloa, SW by the detached section of Clackmannan, and W by Alva in Stirlingshire (detached). Its utmost length, from NNW to SSE, is 6¼ miles; its breadth varies between 7⅞ furlongs and 2¾ miles; and its area is 6976½ acres, of which 30¼ are water. The Devon first, a little below its source, flows 1⅛ mile east-by-northward along the northern border, and then, much lower down, winds 3⅝ miles west-south-westward, partly along or close to the Clackmannan boundary, but mainly across the southern interior. Gloomingside or Gannel Burn, rising at 1650, and Daiglen Burn, rising at 1500, feet above sea-level, run 1⅝ mile south-south-westward and 1⅝ mile south-south-eastward, until, at an altitude of 1650 feet, they unite to form Tillicoultry Burn, which itself flows 1¼ mile south-by-westward to the Devon at Glenfoot. Greenhorn and Broich Burns run northward along the Alva and Blackford boundaries to the Devon, four others of whose affluents have a southerly course, either through the interior or along the eastern and western borders. The scenery of these little mountain rivulets, with their pools, cascades, and wooded banks, is almost as fair to-day as it was in that olden time when the wife of the miller of Menstrie was sprited away by the fairies. In the valley of the Devon the surface declines to less than 50 feet above sea-level; and thence it rises southward to 327 feet near Shannockhill, northward to 1000 at Wester Kirk Craig, 2094 at the Law, 2111 at King's Seat Hill on the Dollar boundary, 2363 at Bencleugh (the loftiest summit of the Ochil Hills), and 1724 at Burnfoot Hill, from which it again declines to close on 1000 feet at the northern border. The entire landscape, whether we view the hills or the plain, is pleasant and beautiful. A rising ground, called the Kirk Craig and the Cuninghar, which closes a fine plain stretching out to it from the Abbey Craig near Stirling, has a strikingly romantic appearance as approached from either the E or the W, and is supposed to be 'the mount at the back of the country,' the *tulaich-cul-tir*, whence the parish derived its name. The rocks are mainly eruptive in the hills, carboniferous in the plain. Red and grey porphyries compose the summits of the central and loftiest heights; and they exhibit some very fine varieties, and contain large crystals of black schorl. Clay-slate is a prevailing rock in the King's Seat chain; and basaltic rocks, in some instances containing curious decomposed masses, occur in the lower heights. Micaceous schist, too, is found, containing numerous garnets. Some veins of copper ore were worked towards the middle of last century; but, after the expenditure upon them of a very great sum of money, were abandoned as not defraying the cost of mining. Silver, lead, cobalt, arsenic, and sulphur seem also to exist, but in small quantities. A rich variety of ironstone, and rich veins of iron ore of the kidney kind, are in sufficient quantity to have been an object of marked attention to the Devon Company. A stratum of dark-blue clay, suitable for fire-bricks, occurs; and on the banks of the Devon are singular concretions of hardened clay in a great variety of fantastic shapes. Sandstone, of good quality, occurs on the skirts of the hills and in the plain, and has been largely quarried. Coal, in four workable seams, and of various quality, occurs in the same district as the sandstone, and is the object of extensive mining and traffic. The soil, at the foot of the hills, is a fine quick loam, of no great depth; on the haughs of the Devon is a deep loam mixed with sand; and in other parts is now loamy, now argillaceous, on a variety of subsoils. Much of the ground is stony; but in many fields where little soil can

be seen, on account of a thick powdering of quartzose nodules, it is, nevertheless, of high fertility. Antiquities are remains of a Caledonian stone-circle on the SE end of the Kirk Craig, and of a circular fort on the basaltic eminence of Castle Craig. At 'Tuligcultrin' St Serf is said to have wrought many miracles, one of them, the raising of a woman's two sons 'frae ded to lyf.' Tillicoultry House, 1 mile ENE of the town, is an elegant mansion, erected about 1806. The estate was granted by Alexander III., in 1263, to an ancestor of the Earl of Mar and Kellie, and in 1483 came to the Colvilles of Culross, of whom Sir James Colville served with much distinction in the French wars under Henri of Navarre, and was created Lord Colville in 1609. In his latter years he spent much of his time at Tillicoultry, where he loved to walk on a beautiful terrace, and to rest himself beneath an aged thorn. It happened, one day of the year 1620, that, standing on a stone, and looking up at the thorn-tree, describing his battles, he fell down the sloping bank of the terrace, and, it is said, was killed on the spot. His grandson sold the property in 1634 to the poet, Sir William Alexander of Menstrie, afterwards Earl of Stirling; and since, it has changed hands no fewer than twelve times. The present owner, Robert George Wardlaw-Ramsay, Esq. of WHITEHILL (b. 1852; suc. 1882), holds 4147 acres in Clackmannan, and 2963 in Edinburgh shire, valued at £3430 and £5134 per annum. HARVIESTOUN, with its memories of Burns and of the late Archbishop Tait, has been noticed separately; and, in all, 4 proprietors hold each an annual value of £500 and upwards, 5 of between £100 and £500. Tillicoultry is in the presbytery of Dunblane and the synod of Perth and Stirling; the living is worth upwards of £400. Two public schools, Coalsnaughton and Tillicoultry, with respective accommodation for 309 and 783 children, had (1884) an average attendance of 234 and 559, and grants of £204, 15s. and £489, 2s. 6d. Valuation (1881) £18,598, 11s. 4d., (1885) £19,685, 8s. 7d. Pop. (1801) 916, (1831) 1472, (1841) 3213, (1861) 5054, (1871) 5118, (1881) 5344.—*Ord. Sur.*, sh. 39, 1869.

Tilliechewan Castle. See BONHILL.

Tillietudlem. See CRAIGNETHAN.

Tillyangus. See CLATT.

Tillyfour. See TOUGH.

Tillynaught Junction, a station in Fordyce parish, Banffshire, on the Great North of Scotland railway, 6 miles WSW of Banff, 2¾ SSE of Portsoy, and 10¼ NNE of Grange Junction.

Tillypronie, a fine modern mansion in Tarland and Migvie parish, Aberdeenshire, 4 miles NW of Tarland village and 10 NNW of Aboyne. Its owner, Sir John Forbes Clark, second Bart. since 1837 (b. 1821; suc. 1870), holds 649 acres in the shire, valued at £350 per annum.—*Ord. Sur.*, sh. 76, 1874.

Tilt, a small alpine lake and a mountain rivulet, in Blair Athole parish, Perthshire. Loch Tilt (3 × 1⅓ furl.; 1650 feet above sea-level) lies among the central Grampians, within ¼ mile of the Aberdeenshire boundary, and 5½ miles E by S of the meeting-point with Inverness-shire. It is overhung by mountains rising to altitudes of from 2131 to 2515 feet. The rivulet, issuing from the lake, is joined within ½ mile by a mountain torrent, descending from the E; proceeds 1⅔ mile south-south-westward, until it receives, on the right, TARF WATER; then goes 13½ miles south-westward, for the most part along a deep narrow alpine glen, 'a ditch to guard and separate a world,' flanked on most of the left side by BENGLO (3671 feet); receives in its progress hundreds of torrents and cataractine rills; becomes, in its lower reach, intricately, picturesquely, romantically grand; is joined, at one of its most magnificent points, by FENDER Burn, making three very fine cascades; and enters the Garry, amid most splendid scenery, at Bridge of Tilt. Its waters are strictly preserved, and swarm with trout. See GLENTILT.—*Ord. Sur.*, shs. 64, 55, 1874-69.

Tilt, Bridge of. See BLAIR ATHOLE.

Tima Water, a troutful hill-stream of Ettrick parish, Selkirkshire, rising on the Dumfriesshire boundary at an altitude of 1300 feet, and running 6⅜ miles north-north-eastward and northward, till, after a descent of 525 feet, it falls into Ettrick Water at Ramseycleuch, 1 mile E of Ettrick church.—*Ord. Sur.*, sh. 16, 1864.

Tingwall, a parish of Shetland, whose church stands near the head of Tingwall Loch, 6 miles WNW of Lerwick, under which there is a post office. Containing also the seaport and post-office village of SCALLOWAY, the parish is bounded N by Delting, NE by Nesting, E by the sea, SE by Lerwick, S by Quarff, and W by the sea and Sandsting. It includes the inhabited islands of Hildesay, Langa, Linga, Oxna, and Trondra; and comprises the ancient parish of Weisdale on the N, Whiteness in the centre, and part of the ancient parish of Tingwall on the S, having till 1701 comprehended likewise the Lerwick-proper district of Lerwick parish. Its utmost length, from N to S, is 13¾ miles; its utmost breadth, from E to W, is 4¾ miles; and its land area is 45⅝ square miles or 29,204 acres. No part of it is more than 2 or 3 miles from the sea, so deeply are its coasts indented with voes or firths—Wadbister Voe, Lax Firth, and Dales Voe on the E; Clift Sound on the S; and Whiteness, Stromness, and Weisdale Voes on the W. A ridge of hills, extending from N to S, divides the parish into two distinct districts, and attains 921 feet at Scalla Field, 511 at Hamarsland Hill, 442 at Herrislee Hill, and 418 at Steinswall Hill. Each of these districts is disposed in straths, nearly parallel with the ridge. The soil is either moss or a dark-coloured loam; and the moss generally lies on a ferruginous subsoil, which is naturally impervious to water, and for some years resists the plough, but yields to persevering tillage, and enrichingly mingles with the soil. Much waste land has of late years been reclaimed. In all the straths is abundance of primitive limestone, and the hills on the eastern side consist of clay and mica schists. Near Rova Head is a bed of good blue roofing-slate; and in several of the meadows are beds of excellent shell-marl. Of a score of fresh-water lakes and lakelets, the largest are the Loch of Girlsta (1½ mile × 3 furl.), Strom Loch (2½ miles × 2⅜ furl.), and Tingwall Loch (8½ × 2⅜ furl.). All afford good trout-fishing; and on an islet, called Lawting, in the last, the 'Grand Foud' anciently held his supreme court, and heard appeals. Hence the name Tingwall (Norse *Thingvöllr*, 'a field or place where courts are held'). On an islet in Strom Loch is the ruin of a small fortalice, said to have been inhabited by a noble, whose father, a Jarl of Orkney, ordered him to be put to death. Tumuli and flint implements are numerous. Tingwall was anciently an archdeaconry; and for upwards of a century after the Reformation, either itself or the village of Scalloway gave name to the Shetland presbytery. The ancient churches of Weisdale and Whiteness were dedicated respectively to the Virgin Mary and St Ola; and so powerful was the hold which Catholicism had on the entire parish, that, as we learn from the *New Statistical Account*, there are 'remains of a very great many pre-Reformation chapels.' One proprietor holds an annual value of more than £500, and 5 hold each between £100 and £500, 5 from £50 to £100, and 13 from £20 to £50. Tingwall is in the presbytery of Lerwick and the synod of Shetland; the living is worth £339. There are two parish churches, each containing about 570 sittings—the one at Tingwall, built in 1788; the other at Whiteness, by Strom Loch, built in 1837. Six public schools—Girlsta, Gott, Scalloway, Trondra, Weisdale, and Whiteness—with total accommodation for 391 children, had (1884) an average attendance of 218, and grants amounting to £190, 5s. 8d. Valuation (1860) £2791, (1884) £4577, 13s. 6d. Pop. (1801) 1863, (1841) 2957, (1861) 2697, (1871) 2491, (1881) 2385, of whom 2164 belonged to the Mainland portion.

Tinto, a big porphyritic hill at the meeting-point of Carmichael, Wiston, Symington, and Covington parishes, Lanarkshire, flanking the left side of a detour of the river Clyde, and culminating 7¼ miles SE of Lanark, 2¾ WSW of Symington Junction. Standing alone, and dominating like a king over the Upper Ward, it is the

loftiest of the 'Southern Heights of the Central Lowlands,' and attains an altitude of 1655 feet above the Clyde at its base, and 2335 feet above the sea. Its base is 6½ miles in length from E to W, and 2⅝ in breadth from N to S; and it rises at first slowly, afterwards more rapidly, to a massive domical summit. It figures very conspicuously throughout a great extent of landscape, and commands a view along the Clyde to the Grampians and Goatfell, together with side views to the Bass, to Cumberland, and to Ireland; it consists of eruptive rocks overcapping Silurian and Devonian rocks; on its SE skirt is the fragment of the ancient castle of FATLIPS; and its summit is crowned by a huge cairn of probably the ancient Caledonian times. Long a beacon post and a place of Beltane fires, it took thence its name of Tinto, signifying the 'hill of fire;' it is believed to have been also a scene of ancient Caledonian heathen worship; and, as to either its grand appearance, its antiquarian associations, or its fancied connection with popular myths, it figures in many old-world rhymes, one of which ('On Tintock tap there is a mist,' etc.) is finely moralised in Dr John Brown's *Jeems the Doorkeeper.—Ord. Sur.*, sh. 23, 1865.

Tinwald, a Dumfriesshire parish on the mutual border of Nithsdale and Annandale. It comprehends the ancient parishes of Tinwald and Trailflat, united in 1650; and contains the small post-office village of AMISFIELD, with a station on the Caledonian railway, 4 miles NNE of the post-town, Dumfries. It is bounded NE by Kirkmichael, E by Lochmaben, S by Torthorwald, SW by Dumfries, and W and NW by Kirkmahoe. Its utmost length, from N by W to S by E, is 5⅝ miles; its utmost breadth is 4⅜ miles; and its area is 10,391½ acres, of which 109 are water. The Water of AE flows 5 miles east-south-eastward along or close to all the Kirkmichael boundary; LOCHAR Water or Park Burn, its head-stream, runs 6⅛ miles south-south-eastward along all the boundary with Kirkmahoe and Dumfries; and several burns rise in the interior, and run to either the Ae or the Lochar. Along the Water of Ae the surface declines to less than 200, along Lochar Water to less than 100, feet above sea-level. The tract adjacent to the latter stream appears to have formed part of an estuary in times subsequent to the human occupation of the surrounding country; comprises a belt about 1 mile long and ¼ mile broad, reclaimed from moss into remarkably fine meadow; and includes a sandy ridge of some 35 acres, called Tinwald Isle, once surrounded with such depth of estuarial water as to have served the purpose of a commodious harbour. About three-fourths of the entire area are occupied by hilly heights, which, rising slowly from the low flat grounds, have diversified shoulders and an undulating tabular summit, are either ploughed or verdant over nearly all their surface, and attain a maximum altitude of 818 feet above sea-level at High Auchnane. They command brilliant views over all the lower basin of the Nith from Queensberry to Criffel, and across the Solway Firth to Skiddaw; and they pass, at the southern boundary, into the continuous but lower heights of Torthorwald and Mouswald. A lake, called Murder Loch, was once of considerable size and great depth, but has been much reduced by draining, and now is nowhere more than 18 feet deep. The predominant rocks are greywacke and greywacke slate. The soil, to some extent, is either reclaimed moss, sandy gravel, or stiff moorish clay; but is mainly a loamy or friable clay, much mixed in places with small stones. Woods cover a considerable area; about 2150 acres are meadow, pasture, or waste; and the rest of the parish is in tillage. Tinwald House, on the western skirt of the hills, 1⅝ mile SE of Amisfield village, was once a seat of the Marquis of Queensberry, but is now a farm house; and the Queensberry estate in Tinwald and Torthorwald was sold in 1884 to James Jardine, Esq. of Dryfeholm. Mansions, noticed separately, are AMISFIELD House and GLENAE; and the principal antiquities are Amisfield Castle, adjoining Amisfield House, vestiges of four ancient forts at Amisfield, Shielhill, High Auchnane, and Barrshell Hill, and traces of a Roman road by Trailflat towards Burnswark. William Paterson (1655-1719), the projector of the Darien colony and the Bank of England, was born at Skipmire farm, as also was his grand-nephew, Dr James Mounsay, first physician for many years to the Empress of Russia. Five proprietors hold each an annual value of more, and 5 of less, than £500. Tinwald is in the presbytery and synod of Dumfries; the living is worth £228. The parish church was built in 1763, and contains 400 sittings. Two public schools, Amisfield and Shieldhill, with respective accommodation for 146 and 49 children, had (1884) an average attendance of 91 and 57, and grants of £71, 10s. and £53, 13s. Valuation (1860) £7795, (1885) £11,190. Pop. (1801) 980, (1831) 1220, (1861) 1079, (1871) 993, (1881) 861.—*Ord. Sur.*, sh. 10, 1864.

Tippermuir. See TIBBERMORE.

Tiree. See TYREE.

Tirry. See LAIRG.

Tobermory, a seaport village in the N of Mull island, Argyllshire, 28 miles WNW of Oban, and 2½ W by S of the nearest point of the Morvern mainland. It stands at the head of a sheltered bay, on the SW side, and towards the north-western entrance of the Sound of Mull; and it was built in 1788, at the same time as Ullapool, by the British Fisheries Company, as the site of a fishing establishment, and the rendezvous of the herring vessels. Its name means 'Mary's Well,' and was taken from a fountain on the spot, which was dedicated to the Virgin, and had much celebrity in pre-Reformation days. The chief part of the town is arranged in the form of a crescent; but an upper town, surmounting a cliff to the rear, consists almost wholly of poor cottages or huts, though a number of villas have been recently built on the outskirts. The harbour or bay is spacious, and almost completely landlocked; and is sheltered across the entrance, and at a brief distance, by Calve Island. A new quay and pier, constructed by the proprietor, F. W. Caldwell, Esq. of Mishnish, at a cost of over £2000, was opened in 1864. As the only town in Mull, and in a large circumjacent district, both Hebridean and continental, Tobermory possesses much provincial importance, and is the seat of some domestic trade. As a seaport, it is the natural outlet of the surplus produce of northern Mull; and enjoys regular steamboat communication with Oban, the Clyde, etc. It has a post office under Oban, with money order, savings' bank, and telegraph departments, branches of the Clydesdale and North of Scotland Bank, 18 insurance agencies, 3 hotels, a reading-room and library, a Scottish Baronial courthouse (1862), a public school, a girls' industrial school, a poorhouse, etc. A new water supply was introduced in 1882 at a cost of over £6000. Places of worship are the *quoad sacra* parochial church (1827-28), a Baptist chapel (1816), and a new Free church (1878-79). The last is an Early English edifice, built at a cost of over £3400, with a tower and spire, and 500 sittings. The *quoad sacra* parish, which was constituted ecclesiastically in 1827, and politically in 1845, is in the presbytery of Mull and the synod of Argyll; its minister's stipend is £120, with manse and glebe. The town is a police burgh under the General Police and Improvement Act (Scot.) of 1862, being governed by a chief magistrate and two bailies, who act, with three others, as police commissioners. Its prison was closed in 1884. The 'Florida,' one of the ships of the Spanish Armada, in 1588 was blown up in Tobermory Bay (see INVERARAY), where the ill-fated Earl of Argyll put in on 11 May 1685, and where the Queen passed the night of 19 Aug. 1847 on board the royal yacht. Pop. of village (1841) 1396, (1851) 1543, (1871) 1196, (1881) 1200, of whom 1007 were Gaelic-speaking and 629 females; of *q. s.* parish (1871) 1344, (1881) 1342. Houses in town (1881) 180 inhabited, 10 vacant, 4 building.

Toberonichy, a village on the E side of Luing island, Argyllshire, 7½ miles S of Easdale.

Todhills, a hamlet in Tealing parish, Forfarshire, 6 miles N by E of Dundee.

Tolla, Loch. See GLENORCHY.

Tolquhon Castle. See TARVES.

Tolsta, a village in Stornoway parish, Lewis, Ross-shire, near Tolsta Head, 13 miles NNE of the town of Stornoway. Pop. (1871) 566, (1881) 597.

Tomachaistel. See MONZIEVAIRD.

Tomatin, a mansion in Moy and Dalarossie parish, Inverness-shire, near the left bank of the winding Findhorn, 16 miles SE of Inverness, under which there is a post office of Tomatin.

Tombae, a place, with the Roman Catholic Church of the Incarnation (1829; 300 sittings), in Inveraven parish, Banffshire, near the right bank of Livet Water, 4½ miles SSE of Glenlivet post office.

Tomich, a place in Kiltarlity parish, Inverness-shire, 23 miles SW of Beauly, under which it has a post office.

Tomintoul, a village and a *quoad sacra* parish in Kirkmichael parish, Banffshire. The village stands, 1100 feet above sea-level, on a small plateau, with the river Avon to the W and Conglass Water to the E. It is 14½ miles S of Ballindalloch station, this being 12 miles NE of Grantown and 12 SW of Craigellachie. Consisting of a central square and a single street, running ¾ mile north-north-westward, it is described by the Queen, under date 5 Sept. 1860, as 'the most tumble-down, poor-looking place I ever saw—a long street with three inns, miserable dirty-looking houses and people, and a sad look of wretchedness about it. Grant told me that it was the dirtiest, poorest village in the whole of the Highlands.' Tomintoul has a post office with money order, savings' bank, and telegraph departments, a public and a Roman Catholic school, cattle fairs on the Tuesday of April after Beauly, the Tuesday after the second Wednesday of May, the Tuesday after the third Wednesday of June, the Tuesday after the third Thursday of July, and the day in August, September, and October after Grantown, a market, called the Well Market, on the last Thursday of July, *o. s.*, and hiring fairs on 26 May and 22 November if the day be a Thursday, and if not, on the Thursday before. The *quoad sacra* parish, constituted by the General Assembly in 1833, and reconstituted by the Court of Teinds in 1845, is in the presbytery of Abernethy and synod of Moray. The stipend is £120, with a manse and a glebe worth respectively £10 and £3 a year. The parochial church, built in 1826 with funds from Government, was renovated in 1877, and contains 336 sittings. St Michael's Roman Catholic church was built in 1837, and contains 368 sittings. Pop. of village (1839) 530, (1861) 659, (1871) 533, (1881) 478; of *q. s.* parish (1871) 799, (1881) 686.—*Ord. Sur.*, sh. 75, 1876.

Tomnachaistel. See MONZIEVAIRD.

Tomnahurich. See INVERNESS.

Tomnavoulin, a place, with a post office under Craigellachie, in Inveraven parish, Banffshire, on the left bank of Livet Water, 8 miles S by E of Ballindalloch station.

Tonderghie, an estate, with a mansion, in Whithorn parish, Wigtownshire, 3 miles S of the town.

Tong, a village in Stornoway parish, Lewis, Ross-shire, 4 miles NNE of the town of Stornoway. Pop. (1871) 402, (1881) 454.

Tongland, a hamlet and a parish of S Kirkcudbrightshire. The hamlet lies on the right bank of the river Dee, 2⅛ miles SSW of Tarff station, and 2½ NNE of Kirkcudbright, under which it has a post office.

The parish contains also Tarff station on a branch (1864) of the Glasgow and South-Western railway, 3½ miles N of Kirkcudbright and 6¾ SW of Castle-Douglas; and Ringford village, 1 mile N by E of Tarff station, with an inn and a post office. Comprising the ancient parishes of Tongland and BALNACROSS, it in outline resembles a triangle with southward apex, and is bounded N and NE by Balmaghie, SE by Kelton and Kirkcudbright, and SW by Twynholm. Its utmost length, from N to S, is 5⅛ miles; its utmost breadth, from E to W, is 4¼ miles; and its area is 9858½ acres, of which 34½ are foreshore and 77 water. The DEE, here a splendid salmon river, flows 5 miles south-south-westward along all the Kelton and Kirkcudbright boundary; and troutful Tarff Water, formed in the NW angle of the parish by the confluence of Clengap and Anstool Burns, winds 5¾ miles, chiefly south-by-eastward, through the interior, then 2 miles south-south-eastward along the Twynholm boundary, till it falls into the Dee near Compstone House. The Dee is spanned, a little below the hamlet, by the old two-arch bridge of 1737, and, 3 furlongs lower down, by the railway viaduct and by Telford's new bridge, which, with a span of 110 feet, consists of one circular arch, and was constructed in 1804-8 at a cost of £7710. The rocky turbulent reach between the bridges is described in Montgomery's *Cherrie and the Slae* (1595). Limpid Tarff Water, at a point 2¾ miles NNW of Ringford, forms a picturesque series of falls, the Linn of Lairdmannoch, from 50 to 60 feet high. Culcaigrie Loch (2 × 1½ furl.; 375 feet) lies on the boundary with Twynholm, and Bargatton Loch (3¼ × 2½ furl.; 250 feet) on that with Balmaghie. At the southern extremity of the *tongue* of *land* between Tarff Water and the Dee the surface declines to less than 100 feet above sea-level; and thence it rises northward to 326 feet at Argrennan Hill, 719 at Kirkconnell Moor, and 588 at Barstobrick or Queen's Hill. The southern district consists of a hilly ridge running N and S, and of gradual declivities sloping down to the rivers. The northern division is rocky and moorish, and consists of a medley of small hills, rising-grounds, valley-land, moss, and meadow. A tract along both margins of Tarff Water is fine flat alluvial ground, naturally rich meadow. The predominant rocks are porphyry and clay slate; whilst the soil of the arable lands is very various, but, in general, especially in the southern and central districts, is fertile in either grain or grass. Less than one-fourth of the entire area is constantly in tillage; and most of the remainder is meadow, hill-pasture, or waste. On the rocky moor called Bartstobrick a spot is pointed out where Mary of Scotland is alleged to have rested to refresh herself in her flight from the battle of Langside to the abbey of DUNDRENNAN. The event has bequeathed to the farm the name of Queenshill. On Kirkconnell Moor, at a great distance from any house, a plain granite monument was erected in 1831 over the grave of the martyr, James Clement, who, with four other Covenanters, was shot here by Grierson of Lag in Feb. 1685. There are sites or remains of cairns in four localities, of a fort near the Free Church manse, and of a stone circle near the Linn of Lairdmannoch. The Præmonstratensian abbey of Tongland, near the parish church, was founded by Fergus, Lord of Galloway, about the middle of the 12th century, for canons who came from Cockersand in Lancashire. In 1325 the Gallowegian rebels slew the abbot and sacrist in the church, because they were foreigners, and had sworn allegiance to Edward I. of England. The last abbot, Damian, satirised by Dunbar, was an Italian alchemist, who, in the reign of James IV. essayed to fly from Stirling Castle to France. He fell into a midden, and fractured his thigh bone—a fiasco ascribed by him to the blending in his pinions of a dunghill cock's plumes with eagle's feathers. Little remains of the abbey save the northern round-headed arch, excavated and restored in 1851. John Morrison (1782-1853), painter, poet, and land-surveyor, spent most of his life in Tongland, and is buried in the churchyard. ARGRENNAN and QUEENSHILL, noticed separately, are the principal residences; and 6 proprietors hold each an annual value of £500 and upwards, 5 of between £100 and £500, and 8 of from £20 to £50. Tongland is in the presbytery of Kirkcudbright and the synod of Galloway; the living is worth £209. The parish church, at the hamlet, is a red granite Gothic edifice of 1813, with 420 sittings and a square pinnacled tower, in which hangs a bell bearing date 1633. A Free church stands close to Tarff station; and two schools, Tongland public and Ringford female industrial, with respective accommodation for 87 and 75 children, had (1884) an average attendance of 60 and 46, and grants of £56, 5s. and £28, 10s. Valuation (1860) £6920, (1885) £14,183. Pop. (1801) 636, (1831) 800, (1861) 892, (1871) 908, (1881) 829.—*Ord. Sur.*, sh. 5, 1857.

Tongue (Norse, *tunga*, 'a tongue of land'), a village and a coast parish in the N of Sutherland. The village of Tongue or Kirkiboll stands on the E side of the Kyle of Tongue, 44 miles WSW of Thurso, and 38½ N of Lairg station, with both of which it communicates thrice a week by mail coach. It has a post office under Thurso, with money order, savings' bank, and telegraph departments, a good hotel, a police station, and sheriff small debt courts in May, July, and October.

The parish, till 1724 forming one with Durness and Eddrachillis as part of 'Lord Reay's country,' is bounded N by the North Sea, E and SE by Farr, and W by Durness. Its utmost length, from N to S, is 17½ miles; its utmost width, from E to W, is 11½ miles; and its area is 136⅘ square miles or 87,329¼ acres, of which 3967½ are water, 2283⅝ foreshore, and 41½ tidal water. Loch Derry or Loch an Dithreibh (1½ mile × 5 furl.; 268 feet) sends off the Amhainn Ceann Locha 3⅝ miles north-by-eastward to the head of the Kyle of Tongue, a sea loch 9¼ miles long and 2⅜ broad at the entrance. Loch Loyal or Laoghal (4⅜ miles × 7 furl.; 369 feet), on the Farr boundary, sends off the river Borgie 10⅜ miles north-north-eastward, through Lochs Craggie or Creagach (1⅝ mile × 3½ furl.) and Slaim (3 × 2 furl.), to Torrisdale Bay (1 × ⅜ mile). Loch na Meide (3¼ miles × 5¼ furl.; 490 feet), in the extreme S, belongs mainly to Tongue, but partly to Durness and Farr, and sends off the Mudale into the latter parish to Loch Naver. Of nearly a hundred other fresh-water lakes or lakelets, the chief are Loch Cuil na Sith* (7½ × 1 furl.; 398 feet), sending off a stream 1¼ mile east-north-eastward to the head of Loch Loyal; and star-shaped Loch Halm or Chaluim (5⅜ × 4⅛ furl.; 690 feet), sending off one 1¼ mile north-westward to the head of Loch Derry. Both streams and lochs afford splendid fishing. Measured along all its ins and outs, the coast, from the entrance of Tongue Bay, extends 7⅛ miles west-north-westward to within 1 mile of Loch Eriboll, and 5⅝ miles eastward and south-eastward to the middle of Torrisdale Bay. It is nearly everywhere rocky and precipitous, rising rapidly to a height of 935 feet above the sea at Whiten Head, 314 at Lamigo Bay, and 300 at Ard Torrisdale. Ellan-na-Coomb (231 feet high) and Ellan-nan-Ron (247), to the NE of the entrance to Tongue Bay, and the Rabbit Islands (100), within the bay, are all three noticed separately. The interior is everywhere hilly and often grandly mountainous, chief elevations from N to S being Meall Leathad na Craoible (1018 feet), Beinns Tomaine (1728), and Ben Loyal (2504), to the E of Loch Derry and the Kyle of Tongue; and, to the W, Ben Hutig (1340), Meallan Liath (1962), and the south-eastern shoulder (2364) of Ben Hope, whose summit (3040) is in Durness parish. Gneiss, capped with conglomerate, on some of the hills, is the predominant rock; syenite forms the main mass of Ben Loyal; mica slate has been quarried on the western border for slates and flags; and moss, partly abounding in bog iron, partly of a kind well suited for fuel, covers an extensive area. The soil of the arable lands is partly a light or a rich black loam, but chiefly a compound of moss, gravel, sand, and clay. Over 150 acres have been reclaimed at Ribigill, steam-power being employed in part of the work; but only about 1100 acres are in tillage, whilst 700 or so are under natural and planted wood. The rest of the parish is largely disposed in sheepwalks, the vast sheep-farm of Ribigill extending to 30,000 acres, and that of Melness (which is partly in Tongue and partly in Durness) to 70,000 acres. The House of Tongue stands 1¼ mile N of the village, at the commencement of the Tongue peninsula, its garden washed by the waves of the Kyle, and its grounds overshadowed by noble old trees. An aggregation of successive structures, the work of many generations, a grotesque collection of masonry formed and run together in defiance of all architectural rule or taste, it is now the residence of the Duke of Sutherland's factor, but it has all the associations of having been the principal seat of Lord Reay, the chief of the clan Mackay, from whom a large section of Sutherland took the name of 'Lord Reay's country.' The wizard, Sir Donald Mackay of Farr, who became first Lord Reay in 1628, figured in both the Thirty Years' War and the Great Rebellion. His fifth descendant, Eric, seventh Lord Reay (1773-1847), sold the Reay estates to the Sutherland family in 1829; and at the death of the ninth Lord Reay in 1875, the title passed to Æneas Mackay (1806-76), eldest male descendant of the second Lord Reay, and a baron of the kingdom of the Netherlands. His son and successor, Donald James Mackay (b. 1839), was raised to the peerage of the United Kingdom in 1881 as Baron Reay of Durness, and in 1884 was appointed Governor of Bombay (See Carolside). The most striking antiquity is Castle-Varrich or Caisteal Bharich, surmounting a promontory to which it gives name, and originally a strong square building of two stories, the first arched with stone, the second covered with wood. It still forms a large square shell, figuring finely in the landscape, but unknown to either history or tradition. Remains of several circular towers occur, so situated within view of one another, from the coast to the interior, that they may be supposed to have been raised as beacon-towers. Other antiquities are tumuli, cup-marked stones, and subterranean retreats. The Duke of Sutherland is sole proprietor. Tongue is the seat of a presbytery in the synod of Sutherland and Caithness; the living is worth £213. The parish church, built in 1680, and almost rebuilt in 1731, was repaired in 1862, and contains 120 sittings. There are Free churches of Melness and Tongue; and three public schools—Melness, Skerray, and Tongue—with respective accommodation for 130, 109, and 110 children, had (1884) an average attendance of 92, 56, and 44, and grants of £56, £38, and £51. Valuation (1860) £2998, (1884) £4335, 10s. 8d. Pop. (1801) 1348, (1831) 2030, (1861) 2077, (1871) 2051, (1881) 1929, of whom 1791 were Gaelic-speaking.—*Ord. Sur.*, shs. 114, 108, 1880.

The presbytery of Tongue comprises the *quoad civilia* parishes of Durness, Eddrachillis, Farr, and Tongue, and the *quoad sacra* parishes of Kinlochbervie and Strathy. Pop. (1881) 6371, of whom 67 were communicants of the Church of Scotland in 1883. The Free Church also has a presbytery of Tongue, with churches at Altnaharrow, Durness, Eddrachillis, Farr, Kinlochbervie, Melness, Strathy, and Tongue, which eight churches together had 3584 members and adherents in 1883.

Tonley House. See Tough.

Tor-Alvie. See Alvie.

Tore, a post office under Inverness in Killearnan parish, Ross-shire, 4 miles W by S of Munlochy.

Torgyle. See Glenmoriston.

Torlum. See Drummond Castle.

Tornaveen, an estate, with a mansion, in Kincardine O'Neil parish, Aberdeenshire, 3 miles N by W of Torphins station.

Torosay, a parish in Mull Island, Argyllshire, containing the hamlet of Lochdonhead, 8½ miles W of Oban, under which it has a post office (Auchnacraig), with money order, savings' bank, and telegraph departments. Communication is held with the mainland by steamers passing through the Sound of Mull. The parish is bounded NE by the Sound of Mull, E, SE, and S by the Firth of Lorn, W by Kilfinichen and Loch-na-Keal, and NW and N by Kilninian. Its utmost length, from E to W, is 12⅓ miles in direct line, but 18½ by the shortest road; its utmost breadth, from N to S, is 10 miles; and its area is nearly 146 square miles or 94,049 acres, of which 1307 lie detached, and 1407⅘ are water, 2018⅘ foreshore, and 29 tidal water. The coast, on the Sound of Mull and the Firth of Lorn, measures, exclusive of sinuosities, about 22 miles; has headlands of various shapes—some rounded, some acutely angular; and is indented with the sea lochs of Don, Spelvie, and Buy, and the bays of Duart, Craignure,

* The anglicising of the Gaelic *Cuil na Sith* ('corner of peace') into *Coolside*, in the *Imperial Gazetteer of Scotland*, is a curious instance of phonetic corruption.

Macalister, Cornahenach, Macallister, and Pennygown. The interior is mainly mountainous, yet contains the three vales of Glenmore, Glen Forsa, and Glen Cainail, and comprises a considerable aggregate of low-lying land. A chain of peaked mountains extends along its centre from end to end, has mostly a common base, and attains a maximum altitude of 3185 feet in Benmore. Several minor chains strike laterally from the main one, rise from common bases, and run nearly parallel to one another; and Ben Buy (2352 feet), a splendid mountain, stands by itself at the head of Loch Buy. A series of small lakes lies in Glenmore, and several others are scattered over the rest of the parish. One considerable rivulet issues from the Glenmore lakes; another issues from Loch Ba; and another traverses Glenforsa. The predominant rocks are trap, sandstone, and a coarse limestone; and the most noted minerals are rock-crystals, calc-spar, and fluor-spar. The soil of the arable lands is chiefly gravelly or mossy, and partly sandy, loamy, or clayey. Less than one-thirteenth of the entire area is in tillage, but about one-twentieth more is capable of reclamation. The chief mansions are Duart House, Glenforsa House, and Lochbuy House. A principal antiquity is Duart Castle; and other antiquities are a tower at the head of Loch Buy, and ruins of three pre-Reformation chapels. Four proprietors hold each an annual value of more than £500. Giving off all Kinlochspelvie and part of Salen *quoad sacra* parish, Torosay is in the presbytery of Mull and the synod of Argyll; the living is worth £212. The parish church was built in 1783, and contains 280 sittings. There is a Free church of Torosay: and four public schools—Crogan, Kinlochspelvie, Lochdonhead, and Lochbuy—with respective accommodation for 28, 39, 70, and 50 children, had (1884) an average attendance of 14, 25, 33, and „ , and grants of £24, 10s., £20, 12s. 3d., £45, 14s. 11d., and £ „ . Valuation (1860) £6871, (1885) £8902, 11s. 10d. Pop. (1801) 1764, (1831) 1889, (1861) 1380, (1871) 1254, (1881) 1102, of whom 392 were Gaelic-speaking, and 396 were in Torosay ecclesiastical parish.

Torphichen (Gael. *torr-fithichean*, 'the raven's hill'), a village and a parish of W Linlithgowshire. The village stands 1½ mile ENE of Westfield station, 4½ miles SSW of Linlithgow, and 2¾ N by W of Bathgate, under which it has a post office. Pop. (1841) 397, (1861) 477, (1871) 406, (1881) 358.

The parish, containing also Blackridge village, 6½ miles to the SW, is bounded on the N and E by Linlithgow, on the SE by Bathgate, at its SW extremity by Shotts and New Monkland in Lanarkshire, and on the NW by Slamannan and Muiravonside in Stirlingshire. Its utmost length, from ENE to WSW, is 9⅜ miles; its breadth varies between ⅜ mile and 2⅜ miles; and its area is 15½ square miles or 9956¼ acres, of which 17⅔ are water. The river Avon or Aven winds 3½ miles east-north-eastward along all the Muiravonside boundary; and its affluent, Polness or Drumtassie Burn, runs 4¾ miles north-eastward along nearly all the Slamannan boundary. Barbauchlaw Burn, coming in from Lanarkshire, runs 7⅝ miles north-eastward along the Shotts and Bathgate boundary, until it unites with Couston or Ballencrieff Water to form Logie Water, which, flowing 6½ furlongs north-north-westward across the narrowest part of the parish, falls into the Avon near Crawhill, and divides the parish into two unequal portions, the smaller to the E, the larger to the SW. Along the Avon the surface declines to 300 feet above sea-level, and thence it rises eastward to 777 at the Torphichen Hills, 749 at Bowden Hill, 912 at Cockleroe, and 1016 at Cairn-naple or Cairnpapple; southwestward to 648 feet near Wester Righead, 705 near Canties, 824 at Eastcraigs Hill, and 759 near Bedlormie. Torphichen thus sends up the highest points in West Lothian, and, compared with the general aspect of that fine champaign county, is markedly tumulated, and boldly hilly at the NE end. The south-western district is naturally moorish; but, making abatements for cold wet moor towards the W, and some little extent of hill-pasture on the E, the parish is generally fertile, and has an enclosed, warm, wealthy appearance. A judicious distribution of planted trees has materially served both to shelter and to beautify. The summits of the hills command a most magnificent prospect of the Lothians and Fife, of the Ochils and the frontier Grampians, and generally of the basin of the Forth, from the sources of the river at Ben Lomond to the mouth of the Firth at North Berwick Law. The rocks are partly eruptive, partly carboniferous, and they exhibit in the eastern group of hills a very interesting series of superpositions. Trap, limestone, and sandstone are quarried; coal is mined; ironstone also occurs; and silver ore exists, but in so small a quantity that an attempt to work it was soon abandoned. The soil is very various, and ranges from fertile alluvium to barren moor. Adjacent to the village on the NE are some remains of the hospital or preceptory of Torphichen, from 1153 the principal Scottish residence of the Knights of St John of Jerusalem. Of the cruciform church of the preceptory, the chancel and the nave are entirely gone, and there only is left a portion of the transept or 'quier,' which, measuring internally 66 feet by 20, is Early Second Pointed in style. The nave appears to have been 112 feet long; but its site is now occupied by an edifice of very different character from it—the plain modern parish church. The traceried window of the southern transept makes some pretensions to beauty, and the four piers supporting the central tower display some architectural grace; but the other parts which remain of the edifice do not prove it to have been conspicuous either for size or for beauty. The belfry or steeple is ascended by a narrow spiral stair, and has comparative meanness of altitude and aspect. Within the choir are the baptismal font, a curious recess where corpses were laid during the celebration of the burial mass, and the monument (1538) of Sir Walter Lindsay, the last preceptor but one. Fragments of massive old buildings in the village, and the stones in the fences over the face of the adjacent country, indicate how great and magnificent a seat of population once surrounded the church. A stone, resembling a common milestone, but with a cross carved on its top, stands in the churchyard, near the W end of the present church, and is thought to mark the centre of a privileged sanctuary-ground attached to the preceptory. Similar stones marked the limits or corners of that ground, each 1 mile distant from the centre; and all the space within the circle drawn round these outlying stones was as much a legal sanctuary as the church at its centre, and afforded protection against the law to every criminal or debtor who entered and remained within its precincts. The knights were introduced to this establishment by David I., and had many possessions conferred on them by him and his successors; and after the suppression of the Knights Templars in 1312, they inherited the extensive property of that great rival Order. In 1291 and 1296, Alexander de Wells, 'prior hospitalis Sancti Johannis Hierusalemitani in Scotia,' swore fealty to Edward I.; and in 1298 he was slain in the battle of Falkirk. From precepts which Edward issued to the sheriffs to restore the property of the Knights, the preceptory of the Order seems, even at that early period, to have had estates in almost every county except Argyll, Bute, and Orkney. Radulph de Lindsay was preceptor under Robert I. Sir Henry Livingston was preceptor under James II., and died in 1463. Sir Henry Knolls, the next preceptor, governed the Order in Scotland during half a century, and was commonly called Lord St John. Treasurer to James III. from 1468 to 1470, he joined the party who hunted down that monarch to his unhappy end; in 1489-90 he was appointed to collect the royal revenues in Linlithgowshire; and after being much employed by James IV., he fell fighting by his side on the Field of Flodden. Sir George Dundas, his successor in the preceptorship, was the school-fellow of Hector Boece, and is praised for his learning. Sir Walter Lindsay, the next preceptor, was a 'valient capitane by sea and land,'

and rose to be Justice-General of Scotland. Sir James Sandilands, the last on the list, joined the Reformers in 1560; and on his paying down 10,000 crowns and engaging to pay an annual rent of 500 merks, he received the remaining estates of the Order as a temporal barony, and was raised to the peerage under the title of Lord Torphichen. (See CALDER HOUSE.) The civil antiquities, besides those noticed under BEDLORMIE, BRIDGE CASTLE, and OGILFACE, are the old peel-like mansion of Kipps, fine sites or remains of four hill-forts or camps, and remains of a stone circle in a field adjoining the mansion of Kipps. The parish is traversed by the middle road from Edinburgh to Glasgow, by the road from Bathgate to Falkirk, and by 7½ furlongs of the Blackstone and Bathgate branch of the North British railway. Henry Bell (1767-1830), who introduced steam navigation into Europe, was a native. (See HELENSBURGH.) Mansions, noticed separately, are BRIDGE CASTLE, CATHLAW, LOCHCOTE, and WALLHOUSE; and 6 proprietors held each an annual value of £500 and upwards, 18 of between £100 and £500. Torphichen is in the presbytery of Linlithgow and the synod of Lothian and Tweeddale; the living is worth £192. The parish church, built in 1756, contains about 360 sittings. The Free church is one of the earliest in Scotland; and at Blackridge there is a Free Church preaching station. Three public schools — Blackridge, Torphichen, and Woodend—with respective accommodation for 80, 140, and 120 children, had (1884) an average attendance of 52, 120, and 115, and grants of £47, 2s., £109, 12s., and £102, 2s. 6d. Valuation (1860) £9640, (1885) £11,325, *plus* £1524 for railway. Pop. (1801) 1028, (1831) 1307, (1861) 1848, (1871) 1630, (1881) 1526.—*Ord. Sur.*, sh. 31, 1867.

Torphins, a *quoad sacra* parish of Aberdeenshire, in the *quoad civilia* parish of Kincardine O'Neil, with a station on the Deeside railway, 24 miles W by S of Aberdeen, under which there is a post office, with money order, savings' bank, and telegraph departments. Constituted in 1875, it is in the presbytery of Kincardine O'Neil and the synod of Aberdeen; the minister's stipend is £183. Pop. (1881) 830.—*Ord. Sur.*, sh. 76, 1874.

Torrance, a village in Campsie parish, Stirlingshire, on the right bank of the Kelvin, 3 miles W of Kirkintilloch. It has a post office under Glasgow, a station on the Kilsyth and Maryhill section of the North British railway, and a new public school of 1882. Pop. with Wester Balgrochan (1871) 671, (1881) 624.—*Ord. Sur.*, sh. 31, 1867.

Torrance, an ancient parish of W Lanarkshire, annexed to East KILBRIDE in 1589. Torrance House, near the left bank of the Rotten Calder, 2 miles SE of East Kilbride village, in its oldest part dates from the 14th century, but has been added to at different times. Its owner, Rt. Edward Stuart Harington-Stuart, Esq. (b. 1834; suc. 1879), holds 2274 acres in the shire, valued at £2681 per annum. The Tor, ¼ mile to the W, is an artificial mound, 160 yards round the base, and 20 of ascent.—*Ord. Sur.*, sh. 23, 1865.

Torridon, Loch, a large sea-loch of Applecross parish, W Ross-shire, striking 7⅝ miles south-eastward to the entrance of Loch SHIELDAIG, and then 6 miles eastward to the foot of Glen Torridon. It measures 4½ miles across the entrance, contracts near Shieldaig to 3 furlongs, and afterwards, in Upper Loch Torridon, attains a maximum width of 1⅛ mile. Of the bold steep mountains surrounding it, the loftiest are Liathach (3456 feet), 2⅝ miles NE of the head of the Upper Loch, and Beinn Alligin (3232), 2½ miles from its northern shore. The Queen drove over from Loch Maree on 15 Sept. 1877, and Upper Loch Torridon she describes as 'almost landlocked and very pretty. . . . To the W are the hills of Skye, rising above the lower purple ones which close in the loch. To the S are Applecross and the high mountain of Beinn Damh (2958 feet), with, in the distance north-eastward, the white peaks of Liathach. . . . An old man, very tottery, passed where I was sketching, and I asked the Duchess of Roxburghe to speak to him; he seemed strange, said he had come from America and was going to England, and thought Torridon very ugly!' (*More Leaves*, 1884). At the head of the Loch, 10 miles WSW of Kinlochewe, is the tiny hamlet of Torridon, where are a small inn, a post office, with money order and savings' bank departments, and a new public school. Torridon House, 2 miles WNW, on the northern shore of the Upper Loch, is a fine mansion, built by Duncan Darroch, Esq. of GOUROCK, who purchased the estate in 1872 for £63,000. It had been sold in 1767 for £1727 (*i.e.*, for little more than 1s. an acre), and in 1836 for £12,150; and its increased value was due to the change from sheep to deer.—*Ord. Sur.*, shs. 81, 91, 82, 1881-82.

Torrie House. See TORRYBURN.

Torrisdale Castle, a mansion in Saddell and Skipness parish, Argyllshire, near the E shore of Kintyre, and 1¼ mile SSW of Carradale.

Torry, a fishing village in NIGG parish, Kincardineshire, on the right bank and near the mouth of the Dee, opposite ABERDEEN, with which it now communicates by Victoria Bridge (1881), a ferry-boat accident of 5 April 1877 having cost the lives of 32 out of 60 passengers. It has a post office under Aberdeen, with money order and savings' bank departments, a battery, a pier, large brickworks, a Free church, and a public school. Pop. (1861) 473, (1871) 686, (1881) 1117.—*Ord. Sur.*, sh. 77, 1873.

Torryburn, a village and a parish of SW Fife. The village, lying on the shore of the Firth of Forth, 1⅛ mile SSE of East Grange station, 2½ miles E of Culross, and 4½ WSW of Dunfermline, is a seaport carrying on a small amount of commerce, and was at one time the port of Dunfermline. It has a post office under Dunfermline, with money order and savings' bank departments, and a fair on the second Wednesday of July. Pop. (1871) 723, (1881) 427, of whom 245 were in Low Torry.

The parish, comprising the greater part of the ancient parish of CROMBIE, and a small part of that of Saline, consists of a main body and a detached portion. The main body is bounded W by Culross in Perthshire (detached), N by Culross and by Saline (detached), E by Carnock and Dunfermline, and S and SW by the Firth of Forth. Its utmost length, from NW to SE, is 4⅜ miles; its utmost breadth is 1⅜ mile; and its area is 3260 acres. The detached portion, lying 5 miles N of the main body and 8 NW of Dunfermline, is bounded W and N by Fossoway in Perthshire, E by Cleish in Kinross-shire and by Dunfermline, and S by Saline. It measures 2¼ by 2 miles, and has an area of 1734⅜ acres. The area of the entire parish is 4995 acres, of which 3 are water and 998¼ foreshore. The coast is mostly low and flat, and in the main body the highest point is Shaw Hill (250 feet), whilst in the detached portion are Cult Hill (865) and Wether Hill (1100). Coal, ironstone, and sandstone have all been largely worked; and a fine brown clay, suitable for making bricks and tiles, is plentiful. The soil of the arable lands is good and highly cultivated. Antiquities are the ruins of Crombie church and a large stone at Tollzies, supposed to commemorate an ancient battle. Torrie House, a little way N of the village, belongs to R. G. Erskine-Wemyss, Esq. of WEMYSS Castle; and 2 proprietors hold each an annual value of £500 and upwards, 6 of between £100 and £500. The detached portion is annexed *quoad sacra* to Saline; and Torryburn itself is in the presbytery of Dunfermline and the synod of Fife; the living is worth £271. The parish church, at Torryburn village, was built in 1800, and contains 502 sittings. There is also a Free church; and a public school, with accommodation for 175 children, had (1884) an average attendance of 103, and a grant of £87, 1s. 6d. Valuation (1856) £6977, 19s., (1880) £8429, 4s., (1885) £7145, 10s. 10d. Pop. (1801) 1403, (1831) 1436, (1861) 1229, (1871) 1051, (1881) 737, of whom 653 were in Torryburn ecclesiastical parish.—*Ord. Sur.*, shs. 40, 39, 1867-69.

Torsay, one of the Slate Islands in Kilbrandon and Kilchattan parish, Argyllshire. It is separated by only narrow straits from Seil on the N, the main-

land on the W, and Luing on the E. The strait between it and Luing offers a communication across, from ebb till half-tide, by a rocky bar not 100 yards in breadth; and is rendered so intricate and whirling by rocks and rocky islets, that the tide sweeps it with great rapidity, and in a perfect dance of complicated movement. The island is an irregular ellipsoid, the longer axis extending NE and SW; and it measures 3 miles by 1, having an area of 275 acres. Its surface exhibits one smooth green hill, 200 feet high, and a ridge of still lower elevation on the W, both descending in gentle slopes to the sea. The whole of its E side, excepting a few trap rocks, and a little greywacke, consists of the same clay-slate as that for which Luing and Seil are celebrated. Pop. (1871) 20, (1881) 10.

Torsonce House, an ancient but renovated mansion in Stow parish, Edinburghshire, near the left bank of Gala Water, 7 furlongs S by W of Stow village.

Torthorwald, a village and a parish of SW Dumfriesshire. The village stands on the face of a long broad brae, 3¼ miles N of Racks station, and 4 ENE of Dumfries, under which it has a post office.

The parish, containing also the villages of Racks and Collin, is bounded NW and N by Tinwald, E by Lochmaben, SE by Mouswald, SW by Caerlaverock, and W by Dumfries. Its utmost length, from N to S, is 6¼ miles; its utmost breadth is 3⅜ miles; and its area is 6843⅓ acres, of which 12 are water. Sluggish Lochar Water flows 6¼ miles south-by-eastward along all the boundary with Dumfries and Caerlaverock; and ditch-like Wath Burn traces all the Mouswald boundary, until, at the southern extremity of the parish, it falls into Lochar Water. All the parish to the S of Collin village, with a strip about ½ mile broad along all the upper part of the western border, is part of Lochar Moss; and at no part exceeds 57 feet above sea-level. The rest of the surface is mainly the western face or westward brae of the middle portion of the broad based range of hill commencing in the N of Tinwald, and extending southward to the S of Mouswald. This brae extends across a base of from 2 to 2½ miles, to a maximum altitude in Torthorwald of 803 feet close to the Lochmaben boundary. It is finely diversified with hillock, terrace, and waving hollow; presents, as seen from Dumfries, and from any other part of the Nith's banks, a very beautiful section of the eastern hill-screen of Lower Nithsdale; and commands, from its highest points, a very brilliant view of the southern half of Dumfriesshire, the eastern part of Galloway, the Solway Firth, and part of Cumberland and the Irish Sea. Much of the moss district has been reclaimed; and all the brae, excepting a small extent of pasture, is in tillage. The predominant rocks are Silurian, and cannot be quarried. The soil, on a bank contiguous to the E side of the moss, is sandy; on the lower and middle parts of the brae is rich and fertile; and on the higher grounds is cold and moorish. Torthorwald Tower, in the southern vicinity of Torthorwald village, is a curious ruin, with very thick walls, whose mortar is as hard as stone. It is of unknown origin, but was inhabited by the Carlyles and Kirkpatricks, as well as by a natural son of the Regent Morton, who, about 1590, was created Lord Torthorwald by James VI. Vestiges of two ancient Caledonian camps are on the brow of the brae, and show two or three concentric trenches. The Marquess of Queensberry's estate in both Torthorwald and Tinwald was purchased in 1884 by James Jardine, Esq. of Dryfeholm; and Sir Alexander Davidson Grierson of Lag, Bart., is another large proprietor; whilst a third holds an annual value of between £300 and £400. Torthorwald is in the presbytery and synod of Dumfries; the living is worth £290. The parish church was built, partly in 1730, chiefly in 1782, and was enlarged in 1791 and 1809. Restored and reseated in 1877, it contains 500 sittings. Two public schools, Collin and Torthorwald, each with accommodation for 100 children, had (1884) an average attendance of 82 and 52, and grants, of £71, 11s. and £53, 13s. Valuation (1860) £5764 15s. 9d., (1885) £7739, 7s. 8d. Pop. (1801) 703, (1841) 1346, (1861) 1254, (1871) 1098, (1881) 990.—*Ord. Sur.*, sh. 10, 1864.

Torwood, a village in Dunipace parish, Stirlingshire, 2¼ miles NNW of Larbert station. To the S are the ruins of Torwood Castle, supposed to have been built by one of the Baillies about the middle of the 16th century, and surrounded by the Torwood, a remnant of the ancient Caledonian Forest. The true 'Wallace Oak' here is gone for ever, though a shoot of it was thriving so late as 1835. The so-called 'Wallace Oak' in the Carbrook policies cannot be more than 300 years old; but an old thorn near it was very possibly the identical tree beneath which Donald Cargill excommunicated Charles II., Sept. 1680 (*Trans. Highl. and Ag. Soc.*, 1881, p. 204).—*Ord. Sur.*, sh. 31, 1867.

Torwoodlee, a handsome and commodious mansion of 1784, in the Selkirkshire portion of Stow parish, near the right bank of Gala Water, 2 miles NW of Galashiels. To the W are the ruins of its predecessor, a large and well-built tower. Held by his ancestors since 1509, Torwoodlee now belongs to James Thomas Pringle, Esq. (b. 1832; suc. 1859), who owns 7901 acres in Selkirk and Roxburgh shires, valued at £4080 per annum.—*Ord. Sur.*, sh. 25, 1865.

Toskerton. See Stoneykirk.

Touchadam. See Polmaise.

Touch House, a mansion in St Ninians parish, Stirlingshire, near the right bank of Touch Burn, 3 miles W by S of Stirling. Having come to his grandmother in 1835, the estate now belongs to Sir Alan-Henry Seton-Steuart of Allanton, fourth Bart. since 1815 (b. 1856; suc. 1884), who is hereditary armour-bearer and squire of the royal body in Scotland. He holds 4801 acres in Stirling and 2673 in Lanark shires, valued at £2676 and £4076 per annum.—*Ord. Sur.*, sh. 39, 1869.

Tough, a parish in Alford district, Aberdeenshire, at its northern boundary containing Whitehouse station, 2⅜ miles ESE of Alford terminus, and 26½ WNW of Aberdeen, under which it has a post and railway telegraph office. It is bounded N by Keig, E by Monymusk, SE by Cluny and by Kincardine O'Neil, S by Lumphanan, W by Leochel-Cushnie, and NW by Alford. Its utmost length, from NNE to SSW, is 6½ miles; its utmost breadth is 3⅝ miles; and its area is 7112⅛ acres, of which 4 are water. The drainage is carried northward towards the Don; and at Whitehouse station the surface declines to 450 feet above sea-level, thence rising to 1306 feet at Green Hill on the Monymusk boundary, and 1621 at Corrennie or Benaquhallie on the Kincardine O'Neil boundary. Red and blue granites and gneiss are the predominant rocks; and hard claystone porphyry and magnesian limestone also occur. The soil, in most places light, in several shallow and stony, is here and there mixed with moss, but very deep and fertile. Less than one-half of the entire area is in tillage; some 1100 acres are under wood; and the rest of the land is either pastoral or waste. Antiquities are two or three cairns, several stone circles, an assemblage of standing-stones and small tumuli, and a standing-stone 12½ feet high and 9½ in circumference, traditionally alleged to mark the grave of Lulach or Luath, the son of Lady Macbeth. The plain farmhouse of Tillyfour, 3½ miles SSW of Whitehouse station, was the home of the 'king of Graziers,' William M'Combie, Esq. (1805-80), whose matchless herd of polled Angus or Aberdeen cattle procured him the honour of a visit from the Queen in 1866, and who sat for West Aberdeenshire in the Liberal interest from 1868 till 1876, being the first tenant-farmer returned in Scotland. In Feb. 1883 the Tillyfour estate, of 1900 acres (1195 arable, 400 hill-pasture, and 305 wood), was sold for £23,000 to Henry Begg, Esq. of Lochnagar Distillery. Tonley House, a large old mansion, ½ mile NNW of the church, is the seat of George Moir-Byres, Esq. (b. 1813; suc. 1881), who holds 4623 acres in the shire, valued at £3527 per annum. Two more mansions are Whitehouse, standing high, to the SE of the station; and Tullochvenus, in

the extreme S, 3 miles N of Lumphanan station. Two proprietors hold each an annual value of more, 2 of less, than £500. Tough is in the presbytery of Alford and the synod of Aberdeen; the living is worth £190. The parish church, 1½ mile S by W of Whitehouse station, was built in 1838, and contains 550 sittings. A new public school, opened on 2 April 1884, with accommodation for 120 children, had (1885) an average attendance of 75, and a grant of £ „ . Valuation (1860) £3233, (1885) £5564, *plus* £511 for railway. Pop. (1801) 629, (1831) 828, (1861) 874, (1871) 760, (1881) 681.—*Ord. Sur.*, sh. 76, 1874.

Tour, a mansion in Kilmaurs parish, Ayrshire, 2 miles NNW of Kilmarnock.

Toward Point, a headland in Dunoon parish, Argyllshire, 6¼ miles SSW of Dunoon town, 3⅝ W by S of Wemyss Bay, and 3⅜ NE of Rothesay. Its lighthouse, standing 56½ feet above high-water, was completed in 1812, and since 1873 has shown a fixed light, flashing every 10 seconds. Near it is a steamboat pier. (See Castle-Toward and Dunoon.)—*Ord. Sur.*, sh. 29, 1873.

Towerhill House, a mansion in Kilmaurs parish, Ayrshire, 2½ miles NW of Kilmarnock.

Tower-Lindsay. See Crawford.

Towie, a parish of Aberdeenshire, whose church stands on the right bank of the Don, 10 miles SSW of Rhynie, and 12½ WSW of Alford (only 8⅞ as the crow flies). On the opposite side of the river are Inverkindie post office (under Aberdeen) and the Glenkindie Arms Inn (1821), where fairs are held on 27 May and 23 November. The parish is bounded N and NE by Kildrummy, E by Leochel-Cushnie, S by Logie-Coldstone and Tarland-Migvie (detached), and W by Logie-Coldstone and detached portions of Tarland-Migvie and Strathdon. Its utmost length, from E to W, is 5⅝ miles; its breadth, from N to S, varies between 3⅛ and 5⅜ miles; and its area is 12,214⅛ acres, of which 740 belong to a detached strip (3⅜ miles × ½ mile), extending north-north-westward from Chapelhaugh, at the NW corner of the main part of the parish. The Don winds 6¾ miles east-north-eastward, mainly across the interior, but partly along the Kildrummy and Strathdon boundaries; and here is joined by four or five little burns. Along it the surface declines to 600 feet above the sea, and chief elevations on its left or northern side are Glaschuil or Grey Hill (1177 feet), Garlet Hill (1596), and *Peat Hill (1857); on its right or southern side, *Scar Hill (1723), *Broom Hill (1883), and Gallows Hill (1425), where asterisks mark those summits that culminate on the confines of the parish. The hills are undulating, smooth, and heathy; and the arable lands are partly haugh, partly the steep declivities of the hills. The soil near the river is very fertile, and produces comparatively early crops. The parish is fairly well wooded, especially to the N of the Don, but in the S there is hardly a tree. Granite and sandstone are scarce or difficult of access; a coarse hard limestone is found in one or two places; and serpentine occurs on one farm. The ancient name of the parish was *Kilbartha* ('the church or cell of Bartha'); and its later name, written in full, was *Towie-Kinbattoch* ('the north-lying land at the head of the fair hill'). There are sites or remains of five pre-Reformation chapels; artificial mounds, seemingly parts of ancient fortifications, at Kinbattoch and Fichlie; large tumuli at Grayhill, one of which, being opened a few years ago, was found to contain charred bones and an arrow head; and a sculptured stone in the churchyard. But the most conspicuous antiquity is the ruin of the Castle of Towie, anciently the fortified seat of a branch of the sept of Forbes. A square tower is almost all of it that now remains. The castle is famous as the scene of a terrible tragedy, enacted in the November of 1571. Alexander Forbes was absent at the time; but his lady, Margaret Campbell, being summoned to surrender by a party of soldiers, despatched by Sir Adam Gordon of Auchindoun, fired upon their leader, one Captain Kerr, and wounded him in the knee. In revenge, the castle was straightway fired, when she and her family and domestics, amounting to twenty-seven persons, perished in the flames.* Three proprietors hold each an annual value of more, and two of less, than £500. Towie is in the presbytery of Alford and the synod of Aberdeen; the living is worth £198. The parish church, built in 1803, is a plain structure. There is also a Free church; and a public school, with accommodation for 110 children, had (1884) an average attendance of 84, and a grant of £80, 19s. 7d. Valuation (1860) £3686, (1885) £5259, 8s. 4d. Pop. (1801) 528, (1831) 728, (1861) 839, (1871) 798, (1881) 759.—*Ord. Sur.*, shs. 76, 75, 1874-76.

Towie-Barclay, an old castle in the SE corner of Turriff parish, Aberdeenshire, near Auchterless station, and 4½ miles SSE of the town of Turriff. Supposed to have been built in 1593, it remained pretty perfect till 1792, was re-roofed in 1874, and retains a fine baronial hall with vaulted ceiling. From the beginning of the 12th century till 1733, the estate belonged to the Barclays, one of whose line was the celebrated Russian general, Prince Michael Barclay de Tolly (1759-1818). In 1792 it was sold to the governors of Gordon's Hospital, Aberdeen, for £21,000.—*Ord. Sur.*, sh. 86, 1876. See vol. iv. of Billings' *Baronial Antiquities* (1852).

Townend House, a mansion in Symington parish, Ayrshire, 4 miles E by N of Troon.

Townhead, a place in Crossmichael parish, Kirkcudbrightshire, 2 miles NW of Castle-Douglas, under which it has a post office.

Townhill, a collier village in Dunfermline parish, Fife, 1½ mile NNE of the town. It has a post and telegraph office under Dunfermline, a public school (1876), and a chapel of ease (1878). Pop. (1871) 855, (1881) 1862.—*Ord. Sur.*, sh. 40, 1867.

Town-Yetholm. See Yetholm.

Traithrow. See Cummertrees.

Tranent, a town and a parish of NW Haddingtonshire. The town is 1½ mile SE of Prestonpans station, 7½ miles W by S of Haddington, 3½ E of Musselburgh, 6½ NE of Dalkeith, and 9½ E of Edinburgh. It stands, 200 to 312 feet above sea-level, on a ridge of rising-ground; and its ancient name, *Travernant*, means 'the hamlet on the vale'—from the Cymric *tref*, 'a homestead or village,' and *nant*, 'a valley.' Its main street extends from E to W along the public road, and is fully ½ mile long. The buildings along this street consist partly of villas and partly of shops, and have a neat and elegant appearance. There are other streets branching off, but the buildings in these are not equal to those in the main street. It is fair, however, to add that all over the town there is much improvement as compared with what it was 30 or 40 years ago. Built, it is said, by the Picts about the middle of the 11th century, and demolished in 1797, the old parish church is now represented by only a small ruin, which the late Mr Cadell converted into a mausoleum. This church about 1145 was confirmed by Thorald, the son of Swan, to the canons of Holyroodhouse. The present plain building, with a square tower, was opened in 1801, and has been lately cleaned and redecorated. It contains a harmonium (1882) and 912 sittings. The churchyard has been much improved within the last few years, and commands a view of the Firth of Forth, unsurpassed for beauty and variety. Other places of worship are a Free church (1843), a U.P. church (1826; 637 sittings), and a Primitive Methodist chapel (1870; 250 sittings). The Catholics, who number 400, have neither chapel nor schools, but a site has been bought, and a building fund is in pro-

* The erroneous date (1751), given for this event in the *New Statistical Account*, has been blindly accepted by many subsequent writers. It is also curious that a wholly identical tragedy is narrated of Corgarff Castle, in Strathdon parish, Aberdeenshire (under the different dates of 1551, 1571, and 1581); of the 'House o' Rodes,' near Gordon village, in Berwickshire; and of Loudoun Castle, in Ayrshire. The fine ballad, *Edom o' Gordon*, has often been published as a 'Border ballad.' Its Ayrshire version is given in the *New Statistical*, vol. v., pp. 846, 847.

gress. The great ornament of the town is its public school, which cost £6500, and was opened on 8 March 1877. It is a stone Elizabethan edifice, with clock-tower and spire, and was designed by Mr Starforth of Glasgow. Stiell's Institution, 5 furlongs N of the town, was built in 1821-22 at a cost of £3000, from a plan by Mr Burn. Till 1884 it provided a free education to some 150 children, having been endowed by George Stiell, a smith and builder in Edinburgh, and a native of Tranent; but the funds will now be expended in bursaries and scholarships for the district, and in making special provision for secondary education in connection with the public school, the boarding and clothing of a few poor children, and the free education of many others. A branch of the Royal Bank now occupies the new premises (1874) of the City of Glasgow Bank; and the town has besides a post office, with money order, savings' bank, and telegraph departments, gasworks, 2 inns, a reading-room, a public hall, a volunteer corps, etc. Waterworks, costing £7000, and capable of supplying 300,000 gallons per diem, were opened on 10 May 1883. The water is drawn from Crichton springs, about 8 miles off. There is a small iron-foundry and agricultural implement works; but weaving, nailmaking, brewing, candle-making, and straw-plaiting are all extinct; and the inhabitants are principally tradesmen, coal-miners, and day-labourers. Queen Mary was once in Tranent, as noticed under Seton; and Colonel Gardiner was borne to the manse from the field of Prestonpans. He was buried at the W end of the old church, but no tombstone now marks his grave, which is included within the present church. In the 'No Militia' riot of August 1797 eleven persons or more were killed and twelve wounded. A police burgh under the General Police and Improvement Act (Scot.) of 1862, Tranent is governed by a senior and five junior commissioners. Pop. (1851) 2096, (1861) 2257, (1871) 2306, (1881) 2235, of whom 1101 were females. Houses (1881) 457 inhabited, 32 vacant, 4 building.

The parish, containing also Elphinstone village and the conjoint fishing-village of Cockenzie and Port-Seton, is bounded N by the Firth of Forth, E by Gladsmuir and Pencaitland, S by Ormiston and by Cranston in Midlothian, W by Inveresk in Midlothian, and NW by Prestonpans. Its utmost length, from N to S, is 4⅛ miles; its breadth varies between 1⅜ and 3¼ miles; and its area is 6176¾ acres, of which 258¼ are foreshore. The coast-line, 2⅛ miles in extent, is all quite flat, except for two greenstone dikes, at Cockenzie and E of Port-Seton, and has a beautiful beach of fine sand. The interior looks, in some views, to be almost level, but really rises southward from the shore, with slow gradient and gentle undulations, attaining 475 feet at Falside Hill and 492 near Elphinstone. The rocks belong to the Carboniferous Limestone series; and, owing to the seams cropping out at the surface, coal has been worked here for upwards of six centuries. Some time between 1210 and 1219, Seyr de Quinci granted a coal pit at Preston to the monks of Newbattle—the earliest notice of coal mining in Scotland; and in 1547 the inhabitants took refuge in the coalpits a few days before the battle of Pinkie. The chief existing mines are those of Tranent and Elphinstone; and from these large quantities are sent out weekly by rail and sea, few coals being more prized in the markets of Scotland. Sandstone has been worked in several quarries; and trap is quarried for road-metal. The soil is partly light and sandy, partly reclaimed morass, but chiefly a rich loam, inferior to none in Scotland. Excepting some 50 acres of sandy downs on the coast, and 100 or so of plantation, the entire area is regularly or occasionally in tillage, and wears a finely cultivated aspect. The ancient parish comprehended all Prestonpans (till 1595), and considerable parts of Pencaitland and Gladsmuir; but did not comprise the barony or ancient parish of Seton, which was annexed to it in 1580. Bankton, Elphinstone Tower, Falside Castle, St Germains, and the palace and church of Seton are all noticed separately. Eight proprietors hold each an annual value of £500 and upwards, and eight of between £100 and £500. Giving off the *quoad sacra* parish of Cockenzie since 1885, Tranent is in the presbytery of Haddington and the synod of Lothian and Tweeddale; the living is worth £400. The three public schools of Tranent, Cockenzie, and Elphinstone, with respective accommodation for 557, 392, and 154 children, had (1884) an average attendance of 419, 293, and 133, and grants of £366, 12s. 6d., £244, 10s., and £108. Valuation (1860) £18,252, (1875) £27,185, (1885) £24,631. Pop. (1801) 3046, (1831) 3620, (1861) 4647, (1871) 4852, (1881) 5198, of whom fully 1750 are in Cockenzie *quoad sacra* parish.—*Ord. Sur.*, shs. 33, 32, 1863-57. See P. M'Neill's *Tranent and its Surroundings* (Edinb. 1883; 2d ed. 1884).

Traprain Law, a conspicuous conical hill in Prestonkirk parish, Haddingtonshire, 4½ miles E by S of Haddington, and 1¾ mile SSW of East Linton. Rising 724 feet above sea-level, it forms a beautiful and far-seen feature in the rich champaign landscape around it; and, from its summit, it brings under the eye of a spectator nearly the whole Firth of Forth, a wide expanse of the German Ocean, and part, it is said, of no fewer than thirteen counties. Its ancient name was Dunpender, from two Gaelic words which signify 'a steep hill;' and this name is quite descriptive of its character. On the S side it rises almost sheer up from the plain in one grand perpendicular ascent; and on other sides, though admitting sheep, and affording them excellent pasturage, it is too steep to be a grazing-ground for black cattle. Its composition is a slaty clinkstone, so seamed as to be irregularly columnar, and occasionally merging from a clouded brown to a porphyritic appearance; and towards the summit the clinkstone passes into greenstone of a bluish-grey hue, and slightly granulated with hornblende.—*Ord. Sur.*, sh. 33, 1863.

Traquair, a village and a parish of E Peeblesshire. The village, of some importance during the 12th century, but now dwindled down to a mere hamlet, stands 1½ mile S of Innerleithen, near the right bank of Quair Water, 5 furlongs from its junction with the Tweed, which is near that point crossed by a wooden bridge giving access to Innerleithen.

The parish was formed in 1674 by incorporating with St Bryde's all that portion of the suppressed parish of Kailzie which lay S of the Tweed. It thus took the name Traquair, meaning the hamlet on the Quair or winding rivulet. It consists of a main body and a detached section. The former is bounded N by Innerleithen, and on its other sides by the Selkirkshire parishes of Yarrow and Peebles (detached); and is intersected from the S to within 2 furlongs of its N boundary by a tongue of Yarrow, 2 miles long and 1¼ mile broad at its N and broadest end. The length of the main body, from its extreme NE to its extreme SW point, is 8½ miles; and its greatest breadth is 5¼ miles. The detached section lies from ½ to 1½ mile W from the main portion, from which it is separated by Yarrow (detached); is wedge-shaped, tapering towards the S, and bounded N and NE by Innerleithen, N and NW by Peebles, and SE and SW by Selkirkshire (Yarrow and Peebles detached); and has an extreme length of 3¾ miles, and a breadth across the N of 2¼ miles. The Tweed winds along the N boundaries for 3¾ miles of the W and smaller portion, and, after passing for 3¾ miles between Innerleithen and Selkirkshire (Yarrow), for 5¾ miles along that of the larger portion. Quair Water, its affluent, gathers its waters from the slopes of Slake Law (2229 feet), Dun Rig (2433), and Whiteknowe Head (1676) in the SW, and follows a tortuous course through the middle of the parish. Of its numerous small tributaries the principal are Newhall, Curly, and Fingland Burns, all rising among the hills in the S. The whole of the Quair valley is dotted with lovely birches, relics of the once famous Ettrick Forest. It was a clump of these near the village of Traquair of which Crawford sang in *The Bush aboon Traquair.*

The Kirk Burn drains the W section of the parish and falls into the Tweed. The greater part of the Selkirkshire boundary is high mountain watershed, and includes, besides the three already mentioned, the following summits of an altitude of 1500 feet and over, viz., Elibank Law (1715 feet), Far Hill (1732), Hare Law (1670), Plora Rig (1567), Minchmuir (1856), Scarf Rig (1552), Blake Muir (1522), Duchar Law (1779), Kirkhope Law (1758), and Birkscairn Hill (2169). The hills are mostly of a lumpish form, and generally green on the S side and heather-clad on the N. Large flocks of Cheviot sheep are reared on their pastures. The interior of the parish is hilly, and, in many parts, rocky and bleak, the heights diminishing in altitude towards the Tweed, whose valley declines to an altitude of 450 feet above sea-level. The rocks are mainly Silurian. The only object of geological interest is an old slate quarry at Grieston on the Traquair estate, which abounds in curious fossils. The mansion-house of Traquair, perhaps the oldest inhabited mansion-house in Scotland, stands in the Quair valley close to the Tweed. It consisted originally of a single tower on the bank of the river, which in those early days took a sharp bend here. The straightening of the course of the river was accomplished by one of the Earls of Traquair. The house has been added to at various times, chiefly during Charles I.'s reign, and now contains the original tower in its NE corner. Built in the style of the old chateau, and standing at the head of a green meadow, with its back towards the river, it now looks down a long broad avenue to the Peebles road. The old-fashioned gateway, flanked by figures of two bears in stone, are said to have suggested to Sir Walter Scott the description of Tully Veolan in *Waverley*. The avenue has not been used for many years. It was closed up in 1796 by the seventh Earl after the death of his countess, and he declared his intention of never having it again opened till another Countess of Traquair should be brought home to fill her place, an event, however, which never happened. The walls of the house are of great thickness; and the interior is fitted up partly in ancient and partly in modern style, and includes the family library and a Roman Catholic chapel. It was originally a royal residence, and was visited from time to time by the Scottish kings and queens. Here William the Lyon, some time between 1175 and 1178, granted a charter constituting the hamlet of Glasgow a bishop's burgh. Mary Queen of Scots and Darnley stayed here for a short time in Aug. 1566, six months before Darnley's tragic death. It is also interesting as being the first place at which Montrose halted during his flight after the disastrous battle of Philiphaugh.

The lands of Traquair were gifted by Robert Bruce to Sir James Douglas, and, after passing through the hands of a branch of the Murray family, then to Douglas of Cluny, and afterwards to the Boyds, they were resumed by the crown in 1469. For 10 years the property of Dr William Rogers (upon whom James I. had conferred them, much to the disgust of his nobles), it was sold by him in 1478, for a most insignificant sum, to James Stuart, Earl of Buchan, who bestowed it on his natural son James Stuart, the first of the illustrious family of Stuarts of Traquair. He acquired by marriage the baronies of Rutherford and Wells, and fell in Flodden (1513), leaving a son William. In 1628 Sir John Stuart was raised to the peerage, under the title of Lord Stuart of Traquair, and in 1633 was further honoured with the dignity of Earl of Traquair, Lord Linton and Caberston. At one time Lord High Treasurer of Scotland, and Lord High Commissioner of the General Assembly of the Church, he sank, towards the close of his life, to a state of destitution. In the former capacity he played a very prominent part in carrying out the commands of Charles I. regarding the introduction of the liturgy into Scotland, and in the latter presided over the Assembly of 12 August 1639, which ratified the Scottish Covenant. As commissioner, he opened parliament after the assembly, but owing to the incompatibility of its demands with the royal orders, he was obliged to prorogue it. Soon after he was impeached by Parliament as a grand incendiary, and only escaped capital punishment through the efforts of the king. His treasurership was taken from him, and he received a pardon on condition that he did not approach the royal person. His breaking through this condition led to further penalties and his banishment to Scotland. Restored to parliament in 1647, again through the King's intercession, he, in 1648, was taken prisoner at the battle of Preston, fighting for the royal cause. He was confined in Warwick Castle for four years, and his estate, considerably drawn upon, was meantime sequestrated. He died in 1659, after living some years in great obscurity and abject poverty. A man of great intellectual vigour, he contributed to his own fall through his rashness and inconsistency. By his countess, Catherine Carnegie, he had four daughters and one son, John Lord Linton (b. 1622), who succeeded as second Earl of Traquair, and died 1666, leaving his young family in charge of his second wife, Lady Ann Seton, who, being a stanch Catholic, educated William, third Earl, in that faith. He was succeeded by his brother Charles, fourth Earl (1659-1741), who was succeeded by his sons Charles (fifth) and John (sixth). Then follow in direct descent Charles, seventh Earl, and Charles, eighth Earl. The latter (b. 1781) died unmarried in 1861, the title thus becoming dormant. The last of the line, the venerable Lady Louisa Stuart of Traquair (b. 1776), sister of the eighth earl, died 8 Dec. 1875 in her hundredth year. The estates passed by will to her kinsman, the present proprietor, the Hon. Henry Maxwell, of the ancient family of the Maxwells Earls of Nithsdale, who assumed the name of Stuart on his accession to the property. He owns 10,778 acres in the shire, valued at £4846. Traquair is in the presbytery of Peebles and the synod of Lothian and Tweeddale; the living is worth £461. The parish church, near the right bank of Quair Water, 2¾ miles S by W of Innerleithen, was built in 1778, and, as altered in 1821, contains 350 sittings. Attached to the N wall is the burial aisle of the Traquair family. Traquair public and the Glen school, with respective accommodation for 104 and 37 children, had (1884) an average attendance of 75 and 25, and grants of £41, 7s. 1d. and £32, 4s. 6d. Valuation (1860) £6071, (1885) £7526, *plus* £2237 for railway. Pop. (1801) 613, (1831) 643, (1861) 687, (1871) 669, (1881) 754.—*Ord. Sur.*, sh. 24, 1864.

Traside, a mansion in Temple parish, Edinburghshire, 8 miles SW of Gorebridge.

Treesbank, a mansion in Riccarton parish, Ayrshire, 2¾ miles S by W of Kilmarnock. It was founded about 1672, when James, second son of Sir Hugh Campbell of Cessnock, obtained the estate from his father; and it was enlarged in 1838. The present proprietor, Captain George James Campbell (b. 1832; suc. 1880), holds 1049 acres in the shire, valued at £1882 per annum. — *Ord. Sur.*, sh. 22, 1865. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Treig, Loch, a wild and beautiful lake in Kilmonivaig parish, Inverness-shire. Lying 784 feet above sea-level, it extends 5½ miles north-by-eastward; varies in breadth between 1 and 5½ furlongs; is overhung by mountains 2000 to 3658 feet high; abounds in fine trout; and sends off the river Treig 2⅝ miles north-by-eastward to the Spean, at a point 6 miles E of the Bridge of Roy and 18¾ ENE of Fort William.—*Ord. Sur.*, shs. 54, 63, 1873.

Treshnish Isles, a group of Hebridean islets, 5 miles NNW of Staffa, 5½ SE of Coll, and 3 W of the entrance of Loch Tuadh in Mull. They are disposed in a chain of between 4 and 5 miles in length from NE to SW; and consist of five principal isles and some intervening rocks. Their whole coasts, with little exception, present perpendicular cliffs of from 40 to upwards of 60 feet in height; and, as seen from a little distance, they possess a singularly interesting appearance, and give a

promise, which they but slenderly realise, of disclosing objects of worth to naturalists and the curious. They are mere uninhabited pasture-grounds, carpeted with rich grass, and attached to a farm in Coll. Cairnbug-more and Cairnbug-beg, two of the principal, are separated by a very narrow strait, and are supposed to have anciently formed the limits and the advanced post of the Sudreys or Southern Hebrides. A fortalice on the former seems to have been constructed by the Macleans, on the site of a more ancient strength which history states to have been in the possession of the Norwegians in 1249; and as part of it which remains is a wall with embrasures skirting the edge of the cliff, it most probably was mounted with ordnance. Many books and records rescued from Iona at the time of the suppression of its monastery having been deposited in this fortalice, were destroyed in the course of a siege which the place sustained from a detachment of Cromwell's army. A barrack on Cairnbug-beg is still tolerably entire. Fladda, a third of the principal isles, has a uniformly flat and uninteresting aspect; Linga, a fourth, rises from a low plain by a succession of terraces into a hill 300 feet high; and Back, the fifth, is 'distinguished by a hill which in some positions has the appearance of a hemisphere, from which the whole island acquires the semblance of an ancient shield with the umbo protuberant in the centre.' The isles are composed throughout of amygdaloid and basalt—the latter of perpendicular fracture but not columnar.

Tresta. See FETLAR.

Trinafour, a place, with an inn, in Blair Athole parish, Perthshire, on the right bank of Erichdie Water, 6½ miles W by S of Calvine station.

Trinity, a place on the Firth of Forth, 3 furlongs W of Newhaven, ¾ mile E of Granton, and 3 miles W by N of the Edinburgh Post Office. Consisting largely of modern villas, it has a post office, a railway station, a pretty Episcopal church (1853), seabaths, and a chain pier, which is much resorted to by swimmers.

Trinity-Gask, a Strathearn parish of Perthshire, whose church stands 3⅝ miles S by E of Madderty station, 7¾ ENE of Crieff, and 6 N by E of Auchterarder, under which there is a post office. It is bounded N by Madderty, E by Findo-Gask, SE by Auchterarder, SW by Blackford, W by Muthill, and NW by the Innerpeffray section of Monzie. Its utmost length, from E to W, is 5½ miles; its breadth varies between 5 furlongs and 3¼ miles; and its area is 5784¼ acres, of which 95½ are water. The EARN winds 6⅝ miles eastward—for the most part along or near to the southern border; and its sub-affluent, Cowgask Burn, flows north-eastward along part of the Madderty boundary. Sinking beside the Earn to less than 50 feet above sea-level, the surface thence rises northward, so as to form a gently sloping bank, with a summit altitude of 306 feet at a point ⅝ mile E by N of the church. This higher ground commands a fine view of the beautiful strath and its hill-screens; but elsewhere the parish is nearly flat, and has but a slight elevation above the river. The Earn, over all its connection with the parish, flows in beautiful sinuosities between pleasant banks, richly adorned in many places with natural and planted wood. A spring called Trinity Well, a little to the S of the manse, had great celebrity in pre-Reformation times for performing cures, and for affording protection against plague and witchcraft. A mineral spring was discovered about 1850 in a marshy place near Cowgask Burn. Its waters possess properties similar in many respects to those of Airthrey at Bridge of Allan. A trap dike runs from E to W, parallel with the northern boundary, and occasionally rises into rugged ridges. A soft red argillaceous rock forms a sort of chasm or ravine for the Earn in the W, but, becoming mingled with mica, passes into sandstone in the centre and E—the Old Red which prevails throughout the strath. The soil is very various. Nearly 1000 acres are under wood; and the rest of the area is mostly in tillage. The old Roman road from the Stormont to Ardoch runs from E to W through the N of the parish, near whose highest point long stood the curiously-sculptured 'Borestone,' 5½ feet high, which in 1884 was removed to Moncreiffe. GASCON HALL and St Bean's church of KINKELL are noticed separately, as also are the mansions of COLQUHALZIE and MILLEARNE. Four proprietors hold each an annual value of £500 and upwards, and five of between £100 and £500. Trinity-Gask is in the presbytery of Auchterarder and the synod of Perth and Stirling; the living is worth £266. The present parish comprises the ancient parishes of Kinkell and Easter Gask, the latter of which had a second place of worship at a spot still known as Chapelhill; and the union of the three churches into one parish is said to have given rise to the name of Trinity-Gask. The local pronunciation, however, is 'Tarnty.' The parish church, built in 1770, contains 195 sittings. Kinkell U.P. church, containing 800 sittings, was built about 1790; and the public school, with accommodation for 54 children, had (1884) an average attendance of 38, and a grant of £47, 2s. Valuation (1866) £6469, (1885) £6838, 8s. 7d. Pop. (1801) 796, (1831) 620, (1861) 488, (1871) 415, (1881) 396.—*Ord. Sur.*, sh. 47, 1869.

Trochrie. See DUNKELD, LITTLE.

Tromie. See GLENTROMIE.

Tronach Castle. See RATHVEN.

Trondra, an island of Tingwall parish, Shetland, ½ mile S of Scalloway. It extends 2½ miles south-by-westward, and has an utmost breadth of ¾ mile. Pop. (1871) 126, (1881) 133.

Trool, Loch, a beautiful lake of MINNIGAFF parish, W Kirkcudbrightshire, 14 miles N of Newton-Stewart. Lying 250 feet above sea-level, it extends 1⅝ mile south-westward, has a maximum width of 1¾ furlong, and sends off the Water of Trool 1¾ mile west-south-westward to the Water of Minnoch.—*Ord. Sur.*, sh. 8, 1863.

Troon (Cymric *trwyn*, 'a nose or promontory'), a seaport town and watering-place in Dundonald parish, Ayrshire, at the terminus of the Troon and Kilmarnock branch (1812) of the GLASGOW AND SOUTH-WESTERN RAILWAY, and ¾ mile W of its Ayr and Irvine section (1837). By road it is 6 miles S of Irvine, 6 N by W of Ayr, and 31 SW by S of Glasgow, whilst by rail it is 9½ miles SW of Kilmarnock, 73½ NNE of Portpatrick, and 8 S by E of Kilwinning Junction. It takes its name from a low rocky promontory, curving 1¼ mile westward and north-westward at the middle of the Bay of Ayr, and measuring ¼ mile in mean breadth. In its natural state this headland was covered with rich pasture towards the land, but became naked rock towards the extreme narrowing point. A continuation of it extends a short distance beneath the sea, so as to be concealed even at low water. The embayed marine space embraced by it is by far the best natural harbour in Ayrshire, affording safe anchorage-ground from every quarter except the NW; and, at half a cable's length from the rock, it has, at half-flood, a depth of 3 fathoms. The Glasgow merchants, aware of its advantages, made a vain effort to purchase the circumjacent property for the erection of a seaport; and, in consequence of the repulse they met, were obliged to select the very inferior site of Port-Glasgow (1668). After the lapse of 140 years, the third Duke of Portland, who had purchased the FULLARTON estate in 1805, commenced in 1808 a series of vigorous operations to render the place fully available for commerce. He first built a pier 500 feet long, nearly at right angles with the rock, where the depth is 19 feet at low water, and he afterwards constructed a fine wet dock with floodgates, two graving-docks, a lighthouse, and large storehouses. Due encouragements were offered to render Troon a resort of trade and a seat of population, and they were rapidly followed by success, so that a town arose where before had been only some saltpans and an old smuggling inn. After the disastrous storm of Jan. 1839, when 22 ships were driven from their moorings, and some of them totally wrecked, a breakwater was erected, 3000 feet long. The total length of quayage is now 5300 feet; and the cost of the harbour works, from first to last, has

exceeded half a million. Troon ranked as a creek of Irvine till 1863, when it was constituted a head port. The total tonnage of vessels belonging to it has dwindled from 5380 in 1873 to 2870 in 1878, and 2539 in 1884, viz., 9 sailing ships of 2389 tons, and 2 steamers of 150. And a decrease is likewise shown in the following table, which gives the tonnage of vessels that entered and cleared from and to foreign countries and coastwise, with cargoes and in ballast:—

	Entered.			Cleared.		
Year.	British.	Foreign.	Total.	British.	Foreign.	Total.
1873	291,715	58,545	350,260	285,988	57,714	343,702
1879	309,620	20,449	330,069	294,323	19,842	314,165
1883	106,551	2,016	108,567	105,985	2,015	108,000

Shipbuilding is carried on to some extent, 6 vessels, of 182 tons each on an average, having been built here during the five years 1879-83.

Sweeping in a graceful curve from the central height of the peninsula across the isthmus, and stretching for a considerable extent along the South Beach, the town is a scattered and healthy place, with dry soil and bracing atmosphere, and with beautiful views of Arran, Ailsa Craig, and all the Ayrshire coast from Turnberry Castle to Ardrossan. It has a post office, with money order, savings' bank, and telegraph departments, branches of the British Linen Co. and Union Banks, 13 insurance agencies, 2 hotels, a gas company, a custom house, a reading room, a hospital, a lifeboat (1871), etc. Places of worship are a *quoad sacra* parochial church (1838; 900 sittings), a handsome Gothic Free church (1857; 600), a U.P. church (1843; 500), and St Patrick's Roman Catholic chapel-school (1883). Troon Academy (1840) is rented by the School Board; and the Fullarton and Portland public schools have respective accommodation for 180 and 160 children. The former was built in 1867 as a Free Church school, and the latter in 1875 at a cost of £2700. Troon is a favourite resort of summer visitors, having good sea-bathing, and a splendid reach of sands on both its northern and its southern shore. In 1878 part of its links, here known as 'knowes,' was laid off as a golfing-ground, and a golf club started. The *quoad sacra* parish is in the presbytery of Ayr and the synod of Glasgow and Ayr; the living is worth £340. Pop. of *q. s.* parish (1881) 2587; of town (1836) 1088, (1841) 1409, (1851) 2404, (1861) 2427, (1871) 2790, (1881) 2383, of whom 1278 were females. Houses (1881) 409 inhabited, 37 vacant.—*Ord. Sur.*, sh. 22, 1865. See the Rev. J. Kirkwood's *Troon and Dundonald* (Kilmarnock, 1875; 3d ed. 1881).

Troqueer, a parish of E Kirkcudbrightshire, containing the burgh of Maxwelltown. It is bounded N by Terregles, E by Dumfries and Caerlaverock, SW by Newabbey, and W by Lochrutton. Its utmost length, from NNW to SSE, is 8½ miles; its utmost breadth is 4⅞ miles; and its area is 19½ square miles or 12,448 acres, of which 567¾ are foreshore and 112 water. The Nith, here broadening to a tidal estuary, curves 8⅝ miles south-by-eastward along or near to all the Dumfriesshire border; Cargen Water and Crooks Pow run across the interior to the Nith; and March Burn, with continuation to the Nith by Newabbey Pow, traces most of the south-western boundary. The surface, generally level throughout the N and E, has yet some agreeable though gentle diversities, and from S to N attains 191 feet near Airds, 639 near Auchenfad House, 817 at Marthrown Hill, and 125 at Corbelly Hill. The last of these in particular, rising at the S end of Maxwelltown, and opposite the lower part of Dumfries, is a lovely eminence, crowned by the fine convent and church (1881-84) of the Immaculate Conception, and commanding a delightful prospect. The congregation of burghal buildings spreads away from the hill's base, sectioned off into two bodies by the river, yet united by three bridges. The steeples, some churches, one or two civic buildings, Burns's mausoleum, and the gorgeous assembly of elegant monuments in the cemetery, look out from among the general mass, and challenge individual attention. The Crichton Institution stands on an undulating declivity below the town; and a profusion of mansions, villas, and *cottages ornées* are scattered over the face of all the burgh's environs on either side of the river. A broad and luxuriant valley stretches away on the N till it becomes narrowed and shut in by cultivated hills, and overhung at the extremity by the conical form of Queensberry. The same valley, flattened down over much of its area into dead level, and cut into a sort of tesselated work of brown and green by Lochar Moss, is screened at 4 miles' distance on the E by a range of hills over which the plough passes yearly. The shining, silver-sheened Nith directs the eye southward among grounds rich as a garden, and points onward to the sombre, cloud-capped Criffel, the far expanse of the Solway Firth, and the blue dim outlines of Skiddaw and other Cumberland mountains. In all this there is nothing sublime, or even strikingly picturesque; yet there are a calm beauty and a certain rich fulness which completely win the heart and live most soothingly in the imagination. The general surface of the parish is naturally sectioned into three parts by three ranges of elevations, which extend parallel one to another, and at almost equal distances, like waves of the sea. The first range rises with a gradual acclivity from the Nith, lies all within the burgh-roods of Maxwelltown, and, in so far as not occupied by the streets of the burgh, presents a richly cultivated aspect. The tract between this range and the second is traversed from end to end by sluggish Cargen Water, and is all in a state of high culture. The second range rises to a greater height than the first, extends considerably farther to the S, and is likewise all under cultivation. A large portion of the tract between the second range and the third is either moss or meadow, in an unsightly state, but largely capable of reclamation. The third range is much higher than the second, extends from end to end of the parish, and is mainly under tillage, but partly occupied by extensive plantations. The predominant rock of all the ranges is mica slate, running into syenite, with occasional protrusions of granite; and the soil of both the slopes and level grounds is mostly fertile, but ranges in character from reclaimed moss to rich loam. The chief antiquity is a moat, or circular artificial mound, supposed to have been anciently a seat of courts of justice. Besides numerous villas of commodious and elegant character, the principal estates and mansions—all noticed separately—are Cargen, Carruchan, Dalskairth, Goldielea, Kirkconnell, Mabie, Mavis Grove, and Terraughtie. The present parish of Troqueer comprises the ancient parish of Troqueer and the northern part of the ancient parish of Kirkconnell. The ancient church of Troqueer belonged to the abbey of Tongland, and passed in 1588 to William Melville, the commendator of that monastery, but was annexed in 1605 to the see of Galloway. The parish of Kirkconnell was suppressed in the reign of Charles I., and divided between Troqueer and Newabbey. Its church stood in the Troqueer section, 1½ mile NE of Newabbey village. The Rev. John Blackadder (1615-85), who figured conspicuously among the ministers ejected at the introduction of prelacy, was minister of Troqueer from 1652 till 1662. Giving off the *quoad sacra* parish of Maxwelltown, Troqueer is in the presbytery and synod of Dumfries; the living is worth £475. Its parish church, near the right bank of the Nith, 7 furlongs SSE of the centre of Maxwelltown, contains 840 sittings. Four public schools—Drumsleet, Laurieknowe, Maxwelltown, and Whinnyhill—with respective accommodation for 127, 300, 359, and 78 children, had (1884) an average attendance of 57, 284, 245, and 24, and grants of £54, 11s. 6d., £277, 4s., £238, 19s. 1d., and £22, 18s. 6d. Valuation (1860) £17,509, (1885) £32,095, 12s. 8d. Pop. (1801) 2774, (1831) 4665, (1861) 4743, (1871) 5402, (1881) 5524, of

whom 3454 were in Troqueer ecclesiastical parish.—*Ord. Sur.*, shs. 9, 10, 5, 6, 1857-64.

Trossachs (Gael. 'bristled territory'), a romantic mountain defile of SW Perthshire, on the southern border of Callander parish, extending 1 mile westward from the head of Loch Achray to the foot of Loch Katrine, and forming a portal of the Western Highlands. Flanked to the N by Ben A'an (1851 feet), and to the SW by huge Ben Venue (2393), the Trossachs are a contracted vale, whose sides are soaring eminences wildly and irregularly feathered all over with hazels, oaks, birches, hawthorns, and mountain-ashes, and whose central space is 'a tumultuous confusion of little rocky eminences, all of the most fantastic and extraordinary forms, everywhere shagged with trees and shrubs,' and presenting 'an aspect of roughness and wildness, of tangled and inextricable boskiness, totally unexampled, it is supposed, in the world.' Thus the discoverer of the Trossachs' beauties, the Rev. Dr Robertson, who was presented to the parish of Callander in 1768, and who winds up six closely printed pages with the remarks that 'In a word, the Trossachs beggar all description.' Many since him have here tried their hands at 'word-painting,' among them Dorothy Wordsworth, Nathaniel Hawthorne, and Alexander Smith; but the finest description is always Sir Walter Scott's in the *Lady of the Lake* (1810):

'The western waves of ebbing day
Roll'd o'er the glen their level way;
Each purple peak, each flinty spire,
Was bathed in floods of living fire.
But not a setting beam could glow
Within the dark ravine below,
Where twined the path in shadow hid,
Round many a rocky pyramid.
Shooting abruptly from the dell
Its thunder-splinter'd pinnacle;
Round many an insulated mass,
The native bulwarks of the pass,
Huge as the tower which builders vain
Presumptuous piled on Shinar's plain.
The rocky summits, split and rent,
Form'd turret, dome, or battlement,
Or seem'd fantastically set
With cupola or minaret,
Wild crests as pagod ever deck'd,
Or mosque of Eastern architect.
Nor were these earth-born castles bare,
Nor lack'd they many a banner fair;
For, from their shiver'd brows display'd,
Far o'er the unfathomable glade,
All twinkling with the dewdrops sheen,
The briar-rose fell in streamers green,
And creeping shrubs, of thousand dyes,
Waved in the west wind's summer sighs.

'Boon Nature scatter'd, free and wild,
Each plant or flower, the mountain's child.
Here eglantine embalm'd the air,
Hawthorn and hazel mingled there;
The primrose pale, and violet flower,
Found in each cliff a narrow bower;
Foxglove and nightshade, side by side,
Emblems of punishment and pride,
Group'd their dark hues with every stain
The weather-beaten crags retain.
With boughs that quaked at every breath
Grey birch and aspen wept beneath;
Aloft, the ash and warrior oak
Cast anchor in the rifted rock;
And, higher yet, the pine-tree hung
His shatter'd trunk, and frequent flung,
Where seem'd the cliffs to meet on high,
His boughs athwart the narrow'd sky.
Highest of all, where white peaks glanced,
Where glist'ning streamers waved and danced,
The wanderer's eye could barely view
The summer heaven's delicious blue:
So wondrous wild, the whole might seem
The scenery of a fairy dream.'

The castellated Trossachs Hotel, 8 miles W by S of Callander, stands at the entrance of the defile, near the northern shore of Loch Achray, and was built by Lady Willoughby de Eresby in 1852, in place of a humble wayside inn, which bore the euphonious name of Ardcheanochrochan. A little to the SE are the pretty little church and the manse of the *quoad sacra* parish of the Trossachs, which is in the presbytery of Dunblane and the synod of Perth and Stirling. Pop. of parish (1881) 302, of whom 56 were in Aberfoyle, 227 in Callander, and 19 in Port of Monteith.—*Ord. Sur.*, sh. 38, 1871.

Trotternish. See Skye.

Troup House, a mansion in Gamrie parish, Banffshire, near the coast, and 3 miles ENE of Gardenstown. Built about 1772, it is the seat of Francis William Garden-Campbell, Esq. (b. 1840; suc. 1848), who holds 9546 acres in the shire, valued at £5794 per annum.—*Ord. Sur.*, sh. 97, 1876.

Truim. See Glentruim.

Trumisgarry. See Uist, North.

Trumland House. See Rousay.

Tuadh, Loch. See Mull.

Tuiteam-Tarbhach. See Kincardine, Ross-shire.

Tulchan Lodge, a handsome two-story shooting-box, built about 1848, in Cromdale parish, Elginshire, 2¼ miles WNW of Advie station.

Tulla, Loch. See Glenorchy.

Tulliallan (Gael. *tulach-aluinn*, 'beautiful knoll), a parish of SE Perthshire (detached), containing the small port of Kincardine, on the NE shore of the river Forth, 3 miles S by W of Kincardine station (in Clackmannan parish), this being 3¼ miles E of Alloa and 10½ WNW of Dunfermline. The ancient parish comprised only the barony of Tulliallan; but the present parish, since 1673, has included also the barony of Kincardine and the lands of Lurg, Sands, and Kellywood, which previously belonged to Culross parish. It is bounded W and N by Clackmannan, E by Culross, and S and SW by the river Forth. Its utmost length, from N to S, is 3¾ miles; its utmost breadth is 3 miles; and its area is 4176½ acres, of which 484 are foreshore and 106½ water. The surface slopes gently southward to the Forth. It comprises part of a gentle broad-based hill (324 feet), which has declinations to the N and NE, but is itself well sheltered in these directions by rising-ground and extensive plantations. The hill looks beautiful in both form and shelter, and is supposed to have given name to the parish. The coast, inclusive of curvatures, has an extent of 3¾ miles. From the western boundary to the New Pans the shore is level; and thence to the extreme E, it abounds in rocks which are either bare or covered with the tide. In 1823-39 a considerable extent of valuable land, as noticed in our article on Kincardine, was reclaimed from the tide by means of two extensive embankments. Nearly 500 acres are under wood; and almost all the rest of the area is either regularly or occasionally in tillage. The soil is variously reclaimed peat, moorish mould, coarse clay, fine loam, and rich alluvium. The rocks belong to the Carboniferous formation; and sandstone of excellent quality has long been worked in the vicinity of Longannet. Coal and ironstone also abound. Of the ancient castle of Tulliallan, 1 mile N by W of Kincardine, nothing remains but the ground story. It seems to have been a place of considerable strength, engirt by a moat, which communicated with the Forth. The lands of Tulliallan, long possessed by the Blackadders, in 1798 were purchased by the distinguished admiral, the Hon. Sir George Keith-Elphinstone, K.B. (1747-1823), who in 1814 was created Viscount Keith, and who in 1818-20 built the noble modern castle of Tulliallan, 5 furlongs N by E of Kincardine. On the death of his elder daughter, the Baroness Keith and Nairne, and Comtesse de Flahault (1788-1867: see Meikleour), Tulliallan passed to her half-sister, the Hon. Mrs Villiers, who in 1870 formed a second marriage with Lord William Godolphin Osborne, uncle of the Duke of Leeds. Another mansion, Sands, is noticed separately. Tulliallan is in the presbytery of Dunblane and the synod of Perth and Stirling; the living is worth £327. The churches are described under Kincardine. Tulliallan public and Kincardine schools, with respective accommodation for 357 and 167 children, had (1884) an average attendance of 190 and 171, and grants of £177, 19s. and £149, 12s. 6d. Valuation (1866) £7847, (1885) £8969. Pop. (1801) 2800, (1831) 3550, (1861) 2410, (1871) 2184, (1881) 2207.—*Ord. Sur.*, sh. 39, 1869.

Tullibardine. See BLACKFORD.

Tullibody, a village in Alloa parish, Clackmannanshire, 2⅜ miles NW of the town. It claims to have been founded by Kenneth MacAlpine about the year 844; and its church was built by David I. in 1149, Tullibody being a separate parish till 1600, when it was united to Alloa. In 1559 the French troops under D'Oysel employed the roof of this church to replace a demolished bridge across the Devon; and the building remained dismantled till the middle of the 18th century, when it was converted into the mausoleum of the Abercromby family. A neat Free church dates from Disruption times; and Tullibody has also a post office under Stirling and a public school. Tullibody House is a plain old mansion, near the left bank of the winding Forth, and 1¼ mile W by N of Alloa. (See AIRTHREY, ALLOA, and MENSTRIE.) Pop. of village (1861) 602, (1871) 694, (1881) 694.—*Ord. Sur.*, sh. 39, 1869.

Tullich. See GLENMUICK.

Tulliebelton. See AUCHTERGAVEN.

Tulliebole. See FOSSOWAY.

Tulloch Castle, a fine mansion in Dingwall parish, Ross-shire, 1 mile N of the town. Its owner, Duncan Henry Caithness Reay Davidson, Esq. (b. 1843; suc. 1881), holds 36,130 acres in the shire, valued at £6094 per annum. The great improvements which have been effected on the estate in the course of the last 40 years are described on pp. 124, 125, of *Trans. Highl. and Ag. Soc.* (1877).—*Ord. Sur.*, sh. 83, 1881.

Tullochgorum, the native seat of a branch of the Clan Grant, in the Inverness-shire portion of Cromdale parish, near the left bank of the Spey, 6¼ miles SW of Grantown, and 3 NE of Boat of Garten. See LONGSIDE and GORDON CASTLE.

Tullybeagles. See METHVEN.

Tullybelton. See AUCHTERGAVEN.

Tullymet, a mansion in Logierait parish, Perthshire, 2¼ miles NE of Ballinluig Junction. Its owner, William Dick, Esq. (b. 1822; suc. 1846), holds 1000 acres in the shire, valued at £1322 per annum. There are a post office of Tullymet under Ballinluig, a Baptist chapel (1806), and a Roman Catholic church (1855).—*Ord. Sur.*, sh. 55, 1869.

Tullynessle and Forbes, a parish in Alford district, Aberdeenshire. It comprehends the ancient parishes of Tullynessle and Forbes, united in 1808; and contains the hamlets of Tullynessle and Forbes, the former 2⅞ miles NNW of Alford station, the latter 1¾ mile WNW of that station, and possessing a post office under Aberdeen. The united parish is bounded N by Clatt and Leslie, E by Keig, S by Alford, and W by Kildrummy and Auchindoir. Its utmost length, from E to W, is 6 miles; its utmost breadth is 4 miles; and its area is 11,329½ acres, of which 50½ are water. The river DON has here an easterly course of 7½ miles—for the first ¾ mile along the Auchindoir border, for the next ¾ mile across a south-western wing (cutting off the farm of Bithnie, on its southern shore), and then along all the southern boundary. From the interior it is fed by the Burn of ESSET and two or three lesser rivulets. In the extreme SE the surface sinks beside the Don to 396 feet above sea-level; and thence it rises to 1042 feet at Cranniecat Hill, 1376 at Manabattock Hill, 1747 at Callievar on the Kildrummy boundary, 1649 at Lord Arthur's Cairn on the Auchindoir boundary, and 1362 at Suie Hill on the northern boundary, the two last being summits of the Correen Hills. Granite, gneiss, and mica slate are the predominant rocks. Excellent granite has been quarried for building purposes, and strongly stratified mica slate for pavement slabs; whilst a coarsish limestone was at one time worked. The soil on the low tracts adjacent to the Don and to parts of the burns is alluvium; on the skirts or lower slopes of the hills is mostly a good loam; and on the higher ground is much of it stony. Fully one-third of the entire area is in tillage; nearly one-eighth is under wood; and most of the rest is hill pasture. The small old castellated mansion of Terpersie or Dalpersie, a farmhouse now, but till 1745 the seat of a branch of the Gordons, stands 1 mile NW of Tullynessle church. Several ancient Caledonian stone-circles have almost all been removed; but the site of General Baillie's encampment on the eve of the Battle of Alford (1645) is still pointed out near Mountgarrie. Mansions, noticed separately, are WHITEHAUGH and LITTLEWOOD; and the property is mostly divided among three. Tullynessle is in the presbytery of Alford and the synod of Aberdeen; the living is worth £324. The parish church at Tullynessle hamlet was built in 1876 at a cost of £2000, and contains 500 sittings. A belfry, which is preserved, bears date 1604, and has done duty for at least two previous churches. Two public schools, Scots' Mill and Tullynessle, with respective accommodation for 61 and 127 children, had (1884) an average attendance of 55 and 55, and grants of £51, 2s. 6d. and £55, 5s. 6d. Valuation (1860) £4260, (1885) £6125, 11s. 6d. Pop. (1801) 536, (1831) 778, (1861) 957, (1871) 970, (1881) 981.—*Ord. Sur.*, sh. 76, 1874.

Tummel, a lake and a river in the N of Perthshire. Loch Tummel, on the mutual border of Dull and Blair Athole parishes, 8½ miles W by N of Pitlochry, is formed by expansion of the river; and, lying 480 feet above sea-level, extends 2¾ miles eastward, with a maximum breadth of ½ mile. Its banks are beautifully diversified with little bays and headlands, with rocks and woods, with dwellings and cultivated fields; and its flanks rise grandly up into masses of rugged mountain 1318 to 2559 feet high. A wooded artificial islet lies near its foot; and on this are the vestiges of a castle, which is said to have been one of the many fastnesses of Robertson of Struan, the chief of the clan Donachie. Pike are numerous; and the trout, ranging between 1 and 10 lbs. in weight, are superior in both shape and flavour to those of Loch Leven. A highish point on the lake's N side, on the line of the public road from Pitlochry to Kinloch-Rannoch, had received the name of the 'Queen's View' some time prior to 3 Oct. 1866, when the Queen first visited it, and here took tea. It commands a prospect of almost the entire basin of the river, from the mountains in the vicinity of Glencoe to those southward from Ben Vrackie—one of the grandest glen views in the United Kingdom.

The river Tummel, issuing from the foot of Loch RANNOCH, runs 19⅞ miles eastward and 9⅛ south-south-eastward, till, near Ballinluig Junction, it forms a confluence with the TAY, of whose main stream it is really a head-stream. It bounds or traverses the parishes of Fortingall, Blair Athole, Dull, Moulin, and Logierait. At a point 4⅝ miles below the lake, it receives the very large tribute of the GARRY, below and above whose confluence the Tummel, as to both its current and its banks, possesses widely different characters. Below, it is a stately stream, grave and majestic in motion, gemmed along its bosom with many pretty islets, and wending among numerous cornfields and enclosed pastures, screened with mountainous heights less wild in character, and much softer in dress, than by far the greater part of those in the Highlands. But above where it receives the Garry it is almost constantly impetuous, tumbles along in rapids, cataracts, and cascades, tears up and rolls before it considerable masses of rock, and runs through a close and wooded mountain glen, so narrow that, with very little exception, the alpine acclivities rise immediately from the water, leaving no flat land or space of any kind on its margin. The narrowness and prolongation of this upper glen, the sudden rise and the loftiness of its boundaries, the great variety and the wonderful intricacy of their outline and surface, the profusion of forest and the intersection and clouding of it with rocks and ravines—these, and the exquisite forms and arrangements of the forested and scattered birches which here form the only wood, render this upper glen of the Tummel decidedly richer in the beauties of a grand and romantic style of landscape than any other space of equal extent in Scotland. Near the junction of the Garry stands FASKALLY House, amid a scene which is magnificently

pretty—strongly pleasing but soon exhausted. A considerable space below this, and towards Pitlochry, makes a remote approach to the character of the upper glen, and exhibits continuous alternations of picture and romance.

But the grand attraction of the Tummel is its celebrated fall, near the foot of the upper glen. Though by no means so high as the Falls of Foyers and of Bruar, it is almost as grand, on account of the greater volume of its water; but its beauties are not likely to be entranced by the salmon ladder proposed in the summer of 1884. In the face of a tremendous rock NW of the fall is a cave, to which there is only one and a very difficult passage. A party of the Macgregors are said to have been surprised in this cave during the period of their proscription, and some of them slain on the spot, while a remnant climbed a tree which grew on the face of the rock, and were precipitated to the bottom by their pursuers cutting away the tree from its root.—*Ord. Sur.*, sh. 55, 1869.

Tummel Bridge, a place in the NW of Dull parish, Perthshire, on the S bank of the Tummel, 7 miles E of Kinloch-Rannoch, 14 W by N of Pitlochry, 8 N by W of Coshieville, and 5 SE of Trinafour. It has a post office under Pitlochry, an inn, a Free church, a public school, and a fair on the Monday before the last Tuesday of October.

Tundergarth, a parish of Annandale, Dumfriesshire, containing Bankshill village, 4 miles E of the post-town, Lockerbie. A long narrow strip of country, descending south-westward from the watershed with Eskdale to within 2¾ miles of the river Annan, it is bounded NW by Dryfesdale and Hutton, NE by Westerkirk and Langholm, SE by Middlebie and Hoddom, and SW by St Mungo. Its utmost length, from NE to SW, is 9¾ miles; its breadth varies between 5⅔ furlongs and 3½ miles; and its area is 16⅔ square miles or 10,513¾ acres, of which 32 are water. From a point ⅝ mile below its source (780 feet above sea-level), the Water of Milk runs 12½ miles south-westward along all the Hutton and Dryfesdale and most of the St Mungo boundary, receiving by the way a dozen indigenous rivulets with an average length of about 1½ mile. The general surface of the parish is, in consequence, a declination to the Milk; but it is singularly broken into steep-sided vales and glens, and abounds in picturesque scenes. In the extreme SW it sinks to 295 feet above sea-level; and thence it rises north-eastward to 869 feet at a *northern spur of Brunswark Hill, 859 at *Risp Fell, 1045 at *Grange Fell, 992 at Blackston Hill, 1460 at *Hen Hill, and 1089 at Friar Edge, where asterisks mark those summits that culminate on or near to the south-eastern and north-eastern boundaries. Greenstone, clay slate, mica slate, and greywacke are the predominant rocks; and antimony has been found in small quantities. The soil of the lower grounds is partly thin and stony, but mostly fertile; of the higher grounds, is of cold character, resting on a retentive sub-soil. Not much more than one-fourth of the entire area is in tillage; about 150 acres are under wood; and the rest of the land is either pastoral or waste. Antiquities are remains of a Caledonian stone circle, the 'Seven Brethren,' on Whiteholm farm; a reach of the Roman road from Brunswark to Upper Nithsdale; small entrenched camps of the kind provincially called birrens on a number of elevated spots; and the site of an ancient baronial fortalice called Tundergarth Castle. Some visitors admire Linhead Linn more than Hawthornden. Five proprietors hold each an annual value of £500 and upwards, 4 of between £100 and £500. Tundergarth is in the presbytery of Lochmaben and the synod of Dumfries; the living is worth £214. The parish church, 1¼ mile SW of Bankshill, was built in 1771, and is sufficiently commodious. The public school, with accommodation for 93 children, had (1884) an average attendance of 73, and a grant of £76, 18s. Valuation (1860) £4893, (1885) £8433, 4s. 7d. Pop. (1801) 485, (1831) 530, (1861) 570, (1871) 510, (1881) 466.—*Ord. Sur.*, sh. 10, 1864.

Turing's Tower. See Foveran.

Turin Hill. See Rescobie.

Turk. See Glenfinglas.

Turnberry Castle, a fragmentary ruin on the coast of Kirkoswald parish, Ayrshire, 6½ miles N of Girvan. When or by whom it was built is quite uncertain, but it seems to have been a stronghold of the old Celtic Lords of Galloway, and afterwards of the Earls of Carrick—a title bestowed in 1186 by William the Lyon on Duncan, the grandson of Fergus of Galloway. Duncan's grand-daughter, Margaret, by her romantic second marriage with Robert de Brus in 1271, conveyed to him both the castle and earldom; and Turnberry disputes with Lochmaben the honour of being the birthplace of Robert Bruce (1274-1329), the greatest of Scotland's kings. On 20 Sept. 1286 it was the meeting-place of the great Scottish barons who supported the title of Bruce the 'Competitor' to the Crown; and in the spring of 1307 it was recaptured from the English by King Robert Bruce. So at least says the tradition which Scott has so finely versified in Canto Fifth of his *Lord of the Isles;* but, according to Dr Hill Burton, Bruce 'found the castle so well garrisoned by Percy that attack was useless. Fortune favoured his adventure, however, in another shape, for in a night attack on Percy's army, close at hand, he caused havoc and panic, and, what was of some moment, gained a valuable booty.' The ruin has suffered so severely from the action of sea and weather, and the ruthless hand of man, as to have little more remaining than its lower vaults and cellars; but from indications which are furnished by these, by some vestiges of a drawbridge, and by the extent of rock which seems to have been included in the site, the castle appears to have been a fortress of great size and strength. It occupies a small low promontory, so as to be washed on three sides by the sea; and, on the land side, it overlooks a rich plain of upwards of 600 acres. Its site commands a full prospect of all the lower Firth of Clyde. A lighthouse, built on part of the castle's site in 1874, rises to a height of 60 feet, and exhibits a light flashing once every 12 seconds, and visible at a distance of 15 nautical miles.—*Ord. Sur.*, sh. 13, 1870.

Turner Hall, an old mansion in Ellon parish, Aberdeenshire, 3 miles N by W of Ellon village.

Turret Burn. See Glenturret.

Turriff, a town and a parish of NW Aberdeenshire. The town stands, 166 feet above sea-level, near the right bank of Idoch Water or the Burn of Turriff, and ¾ mile ESE of Eastside Bridge across the river Deveron, a three-arch sandstone structure, erected in 1826 at a cost of more than £2500. It has a station on the Turriff and Macduff branch (1857-60) of the Great North of Scotland railway, 11¾ miles S by E of Macduff, 18 N of Inverarnsay Junction, and 38½ NNW of Aberdeen. With a central square, from which a number of streets diverge, the town is mainly built of red Delgaty sandstone, somewhat dingy in hue; but the general aspect is neat and clean, the shops are good, and Turriff on the whole is one of the most flourishing smaller towns in the N of Aberdeenshire. It has a post office, with money order, savings' bank, insurance, and railway telegraph departments, branches of the Commercial, North of Scotland, Union, and Town and County Banks, a local savings' bank (1817), 8 insurance agencies, 2 hotels, a gas company (1839), a slaughter-house (1876), agricultural and horticultural societies, a Young Men's Christian Association, with a reading-room, etc. The new North of Scotland Bank, erected in 1875, is the most striking edifice, Scottish Baronial in style, with a square clock-tower, 63 feet high. The ancient market-cross, 20 feet high, was repaired in 1841, and re-erected in 1865. The old parish church 'is supposed to have been built by Malcolm Ceannmor' (1058-93); but its dedication to St Comgan or St Congan inclines one to refer its foundation to the latter half of the 7th century. Marjory, Countess of Buchan, gave it in 1214 to Arbroath Abbey; and in 1272 Alexander Comyn, Earl of Buchan, attached it to an almshouse or hospital for thirteen poor husband-

men of Buchan. This establishment had a warden and six chaplains, who wore the dress of secular monks; and it possessed, with some limitations, the right of sanctuary for criminals. King Robert Bruce appears to have further endowed it for the maintenance of a chaplain to say masses for his brother Nigel Bruce, slain by the English after their capture of the Castle of Kildrummy. In 1412 the church was erected into a prebend of Aberdeen, and its parsons or prebendaries of the parish seem to have always been the wardens of the hospital; at least, from that date till the Reformation, they held the lands with which the Earl of Buchan had endowed it. In 1511, the whole kirklands, village, and glebe were, by a charter under the great seal, erected into a free burgh-of-barony, in favour of Thomas Dickson, prebendary of Turriff. The church is said to have been a stately structure, 120 feet long and 18 wide; but only the choir and belfry remain. The belfry contains a fine toned bell, bearing date 1557, which, having for thirty-four years been transferred to the new parish church, was restored to its former position in 1828, when a clock was purchased by public subscription; and in the choir has been discovered a curious wall-painting of St Ninian. A monument on the N wall bears the date 1636, and six Latin elegiacs on one of the Barclays of Tollie. In the churchyard are several other interesting monuments, belonging to the 16th and the 17th century; and here, too, is buried Bishop Alexander Jolly, D.D. (1755-1838), the first ten years of whose ministry were spent at Turriff. (See FRASERBURGH.) The present parish church was built in 1794, and enlarged in 1830. A plain but commodious edifice, it was adorned in 1875 with a stained-glass window to the memory of the late Garden William Duff, Esq. of Hatton. The Free church, built soon after the Disruption, is a somewhat more ambitious structure. St Congan's Episcopal church (1867) is a good Early English building, consisting of porch, nave, a SW tower and spire 80 feet high, and chancel—the last erected as a memorial of Bishop Jolly. It has an organ and several fine-stained windows.

Bleaching, dyeing, and the manufacture of carpets (started in 1760), of linen yarn (1767), and of woollen cloth, belong wholly or almost wholly to the past; and the pickled pork trade is now the staple industry, Turriff in this respect having earned the title of the 'Chicago of Scotland.' At the station are coal, lime, and manure stores, a steam-mill, and a large granary. Cattle markets are held on the second and fourth Wednesdays of every month; and feeing markets on the Saturday before 27 May, the fourth Wednesday of July, and the Saturday before 23 Nov. A burgh of barony since 1511, the town adopted certain provisions of the Police Improvement (Scotland) Act of 1850 in 1858, and in 1874 nearly all the provisions of the Lindsay Act; so that, as a police burgh, it is now governed by a senior and two junior magistrates and 6 police commissioners. There are burgh police and justice of peace courts; and sheriff small debt courts sit four times a year, in March, June, Sept., and Dec. The municipal voters numbered 370 in 1883-84, when the annual value of real property amounted to £4882, whilst the revenue, including assessments, was £379. Pop. of town (1821) 922, (1841) 1309, (1861) 1843, (1871) 2277, (1881) 2304, of whom 1281 were females. Houses (1881) 564 inhabited, 18 vacant, 2 building.

Turriff or *Turra*, as the name is vulgarly pronounced, has been variously derived from the Gaelic *torr*, 'a mound or round hill,' and *tur*, 'a tower.' In support of the latter etymology, the writer in the *New Statistical* (1842) observes that 'in the memory of persons alive till lately the remains of towers were to be seen; and those of one of them still exist in the gateway and vaults of an old and now almost ruinous building known by the name of "Castle Rainy."' The Knights-Templars appear to have had an establishment at Turriff or property in its vicinity; and a spot of ground on the S still bears the name of Temple Brae. On 22 April 1589 James VI. passed a night in Turriff, which fifty years later made its first and last prominent figure in history. Early in 1639 the Marquis of Huntly assembled his forces first at Turriff, and afterwards at Kintore, whence he marched upon Aberdeen, which he took possession of in name of the King. The Marquis, being informed shortly after his arrival in Aberdeen that a meeting of Covenanters, who resided within his district, was to be held at Turriff on 14 Feb., resolved to disperse them. He therefore wrote letters to his chief dependants, requiring them to meet him at Turriff the same day, and bring with them no arms but swords and 'schottis' or pistols. One of these letters fell into the hands of the Earl of Montrose, then one of the chief Covenanting lords, who determined at all hazards to protect the meeting of his friends, the Covenanters. In pursuance of this resolution he collected with great alacrity some of his best friends in Angus, and with his own and their dependants, to the number of about 800 men, he crossed the mountain range between Angus and Aberdeenshire, and took possession of Turriff on the morning of 14 Feb. When Huntly's party arrived during the course of the day, they were surprised at seeing the little churchyard of the village filled with armed men; and they were still more surprised to observe them levelling their hagbuts at them across the walls of the churchyard. Not knowing how to act in the absence of the Marquis, they retired to a place called the Broad Ford of Towie, about 2 miles S of the village, where they were soon joined by Huntly and his suite. After some consultation the Marquis paraded his men in order of battle along the NW side of the village in sight of Montrose, and dispersed his party, which amounted to 2000 men, without offering to attack Montrose, on the pretence that his commission of lieutenancy only authorised him to act on the defensive. This bloodless affair is known as the 'First Raid of Turray.' Three months later a body of the Covenanters, to the number of about 2000, having assembled at Turriff, the Gordons resolved instantly to attack them before they should be joined by other forces, which were expected to arrive before the 20th of May. Taking along with them four brass field-pieces from Strathbogie, the Gordons, to the number of 800 horse and foot, commenced their march on 13 May at ten o'clock at night, and reached Turriff next morning by daybreak by a road unknown to the sentinels of the Covenanting army. As soon as they approached the town the commander of the Gordons ordered the trumpets to be sounded and the drums to be beat, the noise of which was the first indication the Covenanters had of their arrival. Being thus surprised the latter had no time to make any preparations for defending themselves. They made, indeed, a brief resistance, but were soon dispersed by the fire from the field-pieces, leaving behind them the lairds of Echt and Skene, and a few others, who were taken prisoners. The loss on either side in killed and wounded was very trifling. The skirmish, which is called by writers of the period 'the Trott of Turray,' has 'some claim to commemoration, since in this distant village,' says Dr Hill Burton, 'the first blood was spilt in the great civil war. It was remembered, too, in the North, though the many turns in the mighty conflict drove it out of memory elsewhere, that it was on the side of the Cavaliers that the sword was first drawn.'

The parish contains also Auchterless station at its southern, and Plaidy station at its northern, extremity, the former being 4 miles SSE, and the latter 4¼ N by E, of Turriff station. It is bounded N by King-Edward, E by Monquhitter, SE by Fyvie, S by Auchterless, and SW, W, and NW by Inverkeithny, Marnoch, and Forglen, in Banffshire. Its utmost length, from N by W to S by E, is 7⅝ miles; its breadth varies between 2⅜ and 6⅛ miles; and its area is 28¼ square miles or 18,488⅝ acres, of which 102½ are water. The beautiful river DEVERON curves 1⅛ mile northward, 3¼ miles east-north-eastward, and 2¼ north-north-westward along all the Marnoch and Forglen boundary; and IDOCH WATER, its affluent, after roughly tracing 1⅜ mile of

the Monquhitter boundary, flows 3⅜ miles west-south-westward and north-westward through the interior. This stream is subject to freshets, and in the great flood of 1829 rose 11 feet above its ordinary level. The drainage thus mainly belongs to the basin of the Deveron, but is partly carried south-eastward by some little head-streams of the river YTHAN, which rise and run on the southern border. Perennial springs of excellent water are numerous; mineral springs of different qualities are in several places; a medicinal spring of some local note, called the Physic Well, is in the immediate vicinity of the town; and saints' or holy wells, long regarded with superstitious veneration, are in two or three places. Beside the Deveron the surface declines to less than 100 feet above sea-level; and N of Idoch Water it rises to 330 feet near Delgaty West Lodge, 450 at Hill of Wrae, and 614 at the Hill of Brackens, S to 392 at Hospital Wood and 537 at Hill-head of Ardmiddle. Thus, Turriff, as compared with most other Aberdeenshire parishes, may be called hilly, and presents, on the whole, a beautiful appearance. Silurian rocks, chiefly greywacke, greywacke slate, and clay slate in numerous alternations, predominate, in about three-fourths of the entire area, all inward from the Deveron; the greywacke has been largely worked for buildings, drains, pavement flags, and road metal, and partially for roofing. Devonian rocks, partly conglomerates, partly dull red sandstones, often micaceous, predominate throughout the eastern district, and are quarried for the uses of house-masonry. The soil, on the low grounds adjacent to the streams, is argillaceous alluvium, and elsewhere is much of it sharp, light, and gravelly—fertile, and very early. Nearly two-thirds of the entire area are in tillage; one-seventh is under wood; and most of the rest of the parish is either pastoral or waste. Antiquities, other than those noticed under BALQUHOLLY and TOWIE-BARCLAY, are cairns, tumuli, and standing-stones, supposed to have been memorials of ancient battles with the Danes, the alleged site of the residence of a prince celebrated by Ossian, and the site of two pre-Reformation chapels. Mansions are ARMIDDLE, BALQUHOLLY, DELGATY CASTLE, Glenesk, HATTON CASTLE, LAITHERS, and MUIRESK; and 9 proprietors hold each an annual value of £500 and upwards. Turriff is the seat of a presbytery in the synod of Aberdeen; the living is worth £393. Five public schools—Ardmiddle, Birkenhills, Fintray, Turriff, and Turriff female—with respective accommodation for 100, 80, 115, 380, and 185 children, had (1883) an average attendance of 71, 69, 77, 289, and 129, and grants of £67, 9s. 6d., £66, 14s. 6d., £63, 7s., £261, 3s., and £112, 17s. 6d. Valuation (1860) £12,323, (1885) £21,814, 12s., *plus* £9674 for railway. Pop. (1801) 2090, (1831) 2807, (1861) 3693, (1871) 4348, (1881) 4343.—*Ord. Sur.*, sh. 86, 1876.

The presbytery of Turriff comprises the *quoad civilia* parishes of Alvah, Auchterless, Drumblade, Forglen, Forgue, Fyvie, Gamrie, Inverkeithny, King-Edward, Monquhitter, and Turriff, the *quoad sacra* parishes of Macduff, Millbrex, Newbyth, Ythan-Wells, and Gardenstown, and the chapelry of Fyvie St Mary's. Pop. (1871) 30,446, (1881) 29,659, of whom 9840 were communicants of the Church of Scotland in 1883.—The Free Church also has a presbytery of Turriff, with churches at Auchterless, Drumblade, Forglen, Forgue, Fyvie, Gamrie, Macduff, Monquhitter, and Turriff, which nine churches together had 2262 communicants in 1883.

Tushielaw, a place, with an inn, in Ettrick parish, Selkirkshire, on the left bank of Ettrick Water, which here receives Tushielaw Burn, 15 miles SW of Selkirk. Its ruined tower was the stronghold of Adam Scott, the 'King of Thieves' or 'King of the Border,' who was beheaded by James V. on 27 July 1529, his head being set up over the prison at Edinburgh. Tradition, however, asserts that he was hanged on his own 'gallows tree,' an ancient ash.—*Ord. Sur.*, sh. 16, 1864.

Twatt, a post office in Birsay and Harray parish, Orkney, 12 miles N by E of Stromness.

Twechar, a village of recent growth in Kirkintilloch parish, Dumbartonshire, on the Forth and Clyde Canal, 2 miles SW of Kilsyth. Pop. (1881) 671.

Tweed, a large river in the SE of Scotland, draining also part of the N of Northumberland, and forming, for 16 miles of its course downward from a point midway between the mouth of Eden Water and Birgham, the boundary between England and Scotland. The remaining 2 miles of its course is entirely in England. It rises near the centre of the Southern Uplands, in the extreme S of the county of Peebles, at a small spring called Tweed's Well, 1500 feet above sea-level; and has from this a course first north-easterly, then northerly, and again north-easterly, till it reaches the North Sea at Berwick, a distance, in a straight line from source to mouth, of 64 miles, or, following the windings of the river, of about 97 miles. The drainage basin covers an area of about 1870 square miles, and in this respect is surpassed in Scotland only by the Tay. The boundary of this basin commences close to Berwick, and passes north-westward along the heights between the hollows of Eye Water and Whiteadder Water, till it reaches the Lammermuir Hills; follows this line of heights to a point E of Borthwick Castle; crosses thence to the Moorfoot Hills; strikes off north-westward between Leadburn and Lamancha, and round the hollow of the Lyne in the Pentland Hills, NW of West Linton; passes southward to the W of Dolphinton and Biggar; then along the line of heights between Lanarkshire and Peeblesshire; along the hills between Peeblesshire, Selkirkshire, and Roxburghshire on the N, and Dumfriesshire on the S; strikes through Roxburghshire round the head of Liddesdale, and gaining the Cheviot Hills at Peel Fell (1964 feet), follows their summits to Cheviot Hill (2676), and thence curves through England round the valley of the Till, and so back to the coast a short distance S of Tweedmouth. The basin thus comprehends five-sixths of Berwickshire, a small portion of Haddingtonshire, a sixth of Edinburghshire, almost the whole of Peeblesshire, the whole of Selkirkshire, the whole of Roxburghshire except a portion in the S along Liddesdale, and a considerable portion of the N of Northumberland. Of the whole course of the river itself, the first 36 miles are through Peeblesshire alone, and hence that county received its old name of Tweeddale. During this portion the stream traverses or bounds the parishes of Tweedsmuir, Drummelzier, Broughton, Stobo, Manor, Peebles, Innerleithen, and Traquair. The next 9 miles are through Selkirkshire, the next 2½ along the boundary between Selkirkshire and Roxburghshire, the next 5 through Roxburghshire, the next 10½ along the boundary between Berwickshire and Roxburghshire, and the next 11¾ through Roxburghshire. During this portion the course is through or along the borders of the parishes of Yarrow, Stow, Selkirk, Galashiels, Melrose, St Boswells, Maxton, Merton, Makerstoun, Roxburgh, Kelso, Sprouston, Ednam, and Eccles. Except for 2 miles at the mouth, where it is entirely in Northumberland, the rest of the course is along the boundary between England and Scotland, and between the counties of Berwick and Northumberland. On the Scottish side the parishes are Eccles, Coldstream, Ladykirk, and Hutton.

The solitary spring of Tweed's Well, with its hill border to the E, S, and W, has its claim to be the true source of the river disputed by some of the other head-streams, in particular by the Corse or Cross Burn, which rises ¼ mile higher up, and joins the streamlet from the Well about 30 yards below the spring. It takes its name from a cross which stood on Corse Dod (1670 feet) on the E, by the side of the old road over the shoulder of the hill from Tweeddale to Annandale. In the Peeblesshire portion of the course the principal tributaries from the W, NW, and N are Old, Glenbreck, Glenwhappen, Hallow, and Kingledoors Burns, Biggar Water (with Kilbucho Burn and Holms Water), Weston Burn, Lyne Water, Eddleston Water, Horsburgh Burn, Leithen Water, Walker Burn, and Glenhopeknowe Burn—the last on the boundary with Selkirkshire. From the E, SE, and S come Cor Water, Glencraigie Burn, Fing-

land Burn, Hawkshaw Burn, Fruid Water, Menzion Burn, Talla Water, Westhope Burn, Hearthstane Burn, Polmood Burn, Stanhope Burn, Drummelzier Burn, Manor Water, Hundleshope Burn, and Kirk Burn. In the course through Selkirk, Berwick, and Roxburgh, it receives from the N Cadon Water, Gala Water, Allan Water, Leader Water, and Eden Water; and from the S Quair Water, Ettrick Water (with the Yarrow), Bowden Burn, and the Teviot (with Ale Water, Jed Water, Oxnam Water, and Kale Water). After the river finally quits Roxburghshire, from the Berwickshire side come the Leet Water and the combined stream of the Blackadder and the Whiteadder; and on the English side the principal stream is the Till. All along the course there are a very large number of smaller streams. From the influx of Biggar Water there is a continuous series of railway lines to the mouth of the river at Tweedmouth, sometimes on the one side of the stream and sometimes on the other, but mostly, especially in the lower portion, on the S bank. From near Biggar to Peebles the line is a portion of the Caledonian system; from Peebles to Maxwellheugh near Kelso, different sections of the North British system; and from Maxwellheugh to Tweedmouth, a section of the North-Eastern, an English company. A good line of road also follows the course of the stream, generally at no great distance, all the way from Berwick to the source at Tweedshaws, whence it passes over the ridge into Dumfriesshire, and down Annandale. There are very old bridges at Peebles and Berwick, but till a comparatively recent period there was not a bridge anywhere between. Now there are within this distance a private suspension-bridge at Kingsmeadow, a timber bridge near Innerleithen, a stone bridge at Yair, a stone bridge and a railway viaduct near the mouth of the Ettrick, a good stone bridge and a railway viaduct near Darnick, a suspension-bridge for foot-passengers near Melrose, a stone bridge and a railway viaduct near the mouth of the Leader, a private suspension-bridge near Dryburgh, an iron suspension-bridge and a good stone bridge at the lower end of Kelso, a stone bridge near Coldstream, a suspension-bridge for carriage traffic near Tweedhill, and a very large railway viaduct at Berwick.

Some of the head-streams of the Tweed, Annan, and Clyde rise within ¾ mile of one another; and hence the old rhyme that says—

> 'Annan, Tweed, and Clyde
> Rise a' out o' ae hill side;'

and the Tweed and Clyde flow in parallel courses, and within about 7 miles of each other, till near Biggar they finally take their separate ways E and W. They are much on the same level, and it would not be a very difficult matter to divert the upper Clyde waters into the Tweed by the cutting of a very short channel; and even were good care not taken of the banks of the Clyde, it is possible that the river might perform the work for itself. Tradition says that before Glasgow had acquired commercial importance, a project was conceived of actually making this cutting, in order so to increase the volume of the Tweed as to make it navigable for a considerable distance upwards from the mouth. Farther down, near Dolphinton, a small stream divides so as to send a portion of its waters to Medwin Water and so to the Clyde; while the other portion passes to Tarth Water, and so by Lyne Water to the Tweed. At some parts of the river's own course there are reaches where lakes of considerable size seem to have at one time existed, and there are also traces of old courses, which were occupied probably in pre-glacial times. One well-marked example is above Neidpath Castle near Peebles, where there is the basin of an old lake extending upwards from the narrow glen at Neidpath. It had existed before the narrow neck of rock there was cut through, and at this time the course of the river had been first southward by the line of Manor Water to Cademuir, and thence eastward through the narrow hollow NW of Hundleshope, and then south-eastward by the line of the lower part of Hundleshope Burn to the present course of the river near Whitehaugh. Of the 1250 feet of fall along the course of the Tweed, from the source to the sea, over 700 are accomplished in the 26 miles between Tweed's Well and Peebles; and as only 500 remain to be distributed over the other 70 miles of flow, there are, as might be expected, deep still pools and long reaches of water, with hardly any perceptible current, with rapids of no great length or steepness coming between. In consequence of the gravel-beds at these rapids, it is, however, navigable—and that for craft of very small size—for only a short distance from the mouth, there being sufficient depth of water at high tide to float a vessel to New Water Ford, 6 miles above Berwick; while the tide flows 10 miles up, to about Norham Castle.

Though otherwise of little commercial importance, the Tweed and its tributaries afford the best salmon, grilse, and sea-trout fishing in Scotland, 'and although it is beyond a doubt that salmon were more numerous in its waters some 50 or 60 years ago than now, a large stock of fish generally find their way each season into the respective casts, and excellent sport is the rule.' There are no fewer than 316 named salmon casts, of which the 55 from the Inch 3 miles above Peebles to Kame-knowe-end near Elibank are open to the public. The others are preserved, but fishing may sometimes be had by arrangement with the tenants. The excellence of the spawning ground, both in the Tweed itself and in all its tributaries, makes the river very prolific; but to such an extent did over-fishing prevail in the first half of the present century, that between 1808 and 1856, the number of fish captured in one year had fallen off very considerably. Special Acts of Parliament were obtained in 1857 and 1859 for the prohibition of fixed nets for 9 miles along the coast on both sides of the mouth, and the regulation of the fishing on the river itself, and the result is that the number of salmon captured yearly is in excess of the annual returns of the beginning of the century. The upland districts are now so well drained that in dry summers the river is always low and angling poor, and of late years the fungus, *saprolegnia ferax*, has made severe ravages among the fish, and although a large amount of scientific attention has been directed to the investigation of the disease, all efforts to discover its cause or find a cure have hitherto been in vain. The harm that is being done may be estimated from the fact that in the years 1880, 1881, 1882, no fewer than 22,756 diseased salmon, grilse, and sea-trout were removed from the river. The rental is about £13,000 a year. The rod season extends from 1 Feb. to 30 Nov. Trout-fishing is excellent all along the river, which for this purpose is open to the public from the source to the junction of Leader Water, from Kelso to Carham, and nearly the whole way from Wark to Tweedmouth. The fish vary from 3 pounds downwards, but the majority of them are under one pound.

All along the vale there are a number of towns and thriving villages, of which the chief are Peebles, Innerleithen, Walkerburn, Galashiels, Darnick, Melrose, Newton, Lessudden, Maxton, Rutherford, Roxburgh, Kelso, Sprouston, Birgham, and Coldstream; and on the English side Carham, Wark, Cornhill, and Norham: while at the mouth are Berwick and Tweedmouth. There are also a large number of old castles and modern mansions, of which the chief are Oliver Castle, Tennis or Thane's Castle, Dalwick House, Stobo Castle, Easter Dalwick, Easter Haprew, Lyne, Neidpath Castle, Rosetta, Venlaw House, Kerfield, Haystoun, Horsburgh Tower, Kailzie House, Cardrona, Glenormiston, Grierston Tower, Traquair, Elibank, Ashiesteel, Fernielee, Sunderland Hall, Abbotsford, Pavilion, Darnick Tower, Littledean Tower, Gattonside House, Allerly House, Drygrange, Bemersyde, Merton House, Smailholm Tower, Makerstoun House, Floors Castle, Hendersyde Park, Ednam House, Pinnacle Hill, Lennel House, Tillmouth Castle, Twisel Castle, Milnegraden, Ladykirk House, Norham Castle, Swinton House, Tweedhill, and Paxton House. Nor do these exhaust the old keeps—

many of them with historic names—that studded the whole valley 'from Berwick to the Bield,' and frowned defiance across the border at the line of strengths on the English side. These peels are a peculiar feature of the whole line of the river as well as of the courses of its tributaries, marking 'barbarous times when Border raids were in continual activity, and when no one on either side of the marches, or debateable land, could lay down his head to sleep at night without the chance of having to stand to his defence, or perhaps to mount and ride ere morning. Intended for the general advantage and preservation of all the inhabitants of the valley, they were built alternately on both sides of the river, and in a continued series, one in view of another; so that a fire, kindled on the top of any one of them, was immediately responded to, in the same way, by all the others in succession; the smoke giving the signal by day and the flame by night—thus spreading the alarm through a whole country of seventy miles in extent, in the provincial phrase, from "Berwick to the Bield," —and to a breadth of not less than fifty miles, carrying alarm into the uppermost parts of every tributary glen. Would that we could be inspired with the fancy of our own immortal Sir Walter, that we might, for only one moment, imagine the sudden upstirring in this way of the wild and warlike population of so great an extent of country, during the days of Border contest! What a shouting of men and neighing of horses—what a hurried donning of back and breast-pieces and morions—what a jingling of bridles and saddling of steeds—what a buckling on of swords and grasping of lances, and how the woods and the steep faces of the hills must have re-echoed to the gallop of the various little parties, hastening to unite themselves together. Then came the assault of the invading foe—the crash of combat—the shouts of triumph and the shrieks of dying men—all full of the most romantic and picturesque suggestions. Nay, if we could only fancy the laird of any one of these little fortalices, after having been warned by his provident dame, by the usual hint of a covered dish full of steel spurs set before him, that there was no more meat in the larder—if we could only imagine him and his followers getting hurriedly to boot and saddle, to ride across the Border on a foray into England to harry some district of its beeves, we should conjure up a picture full of the most romantic circumstances and stirring interest.' The whole district is full of historic associations. Berwick, Norham, Coldstream, Birgham, Kelso, Dryburgh, Melrose—the names need but to be mentioned; and more, they have had their poet in the great magician of the north, whose ambition was to be a Border laird, and to found a new branch of the great Border family, and whose name and genius must ever be associated with Ashiesteel and Abbotsford; and for much of whose most congenial work this Border land provided both scene and material. But while, looking back upon the course of the Tweed, 'no one who has seen it, and who knows the land through which the stream flows, can be indifferent to the memories of ancient towers and olden names famous in Scottish story, which it bears along, of holy though broken shrines which keep sacred for us the illustrious dead, Bruce, and Douglas, and Walter Scott, or fail to feel the soothing power of that pathetic peace which broods over ancient battlefields;' yet 'that which most attracts the stranger, which unites the natives of the Borders themselves most closely, most deeply, which binds in one the people of Teviot and Ettrick, of Yarrow and of Tweed, is the poetry, both old and new, the ballad and song of the *Minstrelsy* and such strains as "The Flowers of the Forest" and "Lucy's Flittin'." This touches the old heroic life that was once loved in the Border Land, our sympathy with the griefs, the loves, the sorrows, the fates, and the fortunes of the men and the women who dwelt long ago in the ancient Border homesteads, whose ruins now speak to us on many a Lowland brae with a weird old-world suggestion and an inexpressible pathos. For true it is that no poetry is less indebted to foreign inspiration than that of the Borders. It is purely autochthonal. It has sprung from the soil, from native deeds and story, from the very heart of the people through successive generations. Border men did the deeds and Border maidens felt the love which the Border minstrels sung. The ballad and the song truly reflect the whole character of the people in its freshness, vigour, old roughness, its dark shades and its bright sides, its heroism and its tenderness. In the early dawn of Border story, in the thirteenth century, there are two dim personages who seem to prefigure the two main lines of subsequent Border activity—intellectual and imaginative.' The one is 'the wondrous wizard,' Michael Scott, whose scientific bent was but the prototype of that which animated Mungo Park, Sir David Brewster, and Mrs Somerville; the other Thomas the Rhymer of Ercildoune, forerunner of those who sang of the *Dowie Dens o' Yarrow*, *The Bush aboon Traquair*, and *The Broom o' the Cowdenknowes*, and on to the mightier minstrelsy of Thomson, Hogg, Leyden, and Scott. The older bards, according to Professor Veitch, have caught and reproduced in their verse the pure characteristics of Tweedside. Their poetry 'breathes a sweet pastoral melody. There is a passionate fondness dashed with sweetness and regret—a mingling of love and sorrow, hopefulness and despair. This curious blending of opposite feelings flows all through the songs of the Tweed, and seems to reflect the familiar contrast in the scenery—the sparkling gleam of the morning and noon gradually passing into the pathetic shade of the gloamin' on the river itself.' From Tweedside Thomson must have drawn the then daring idea that scenery was an object of poetic interest in itself. From the 'mysterious belt of grey clear light—the weather gleam—that runs at nightfall across the wavy lines of the Border hills,' Hogg drew that charm and inspiration of faërie and fairyland that enabled him in *Kilmeny* to reproduce the best and purest part of the old rude belief in the constant presence of the invisible and supernatural around us; while Leyden first

> 'Saw with strange delight the snow-clouds form,
> When Ruberslaw conceives the mountain storm,'

and then by showing us 'the beauty, the gentle beauty and not less the power, the grandeur, to be found in the Border scenery,' opened 'the eyes of dwellers on the Border to the glory that is at their own doors.' And Professor Veitch himself is a proof that the song-compelling power of the river is by no means exhausted.

In picturesqueness of scenery the Tweed is inferior to the Tay, or any of its great tributaries, as well as to the Clyde. For the first 15 miles of its course down nearly to the junction of Biggar Water the valley is narrow, bare, and solitary, but the soft green pastoral heights by which it is bounded give it a distinct character of its own. The river flows 'down over the bluish greywacke rock, and for miles amid broken, isolated, half-smoothed blocks, severed from its bed. Here and there its banks have an abrupt picturesqueness, but as a rule its flow is a rippling rapid movement spreading out in silvery sheen, by the foot of the confining hill, or amid the narrow haughs by the way; occasionally a knowe of rock juts out from the bank, and then the river swings round the obstruction into a restful pool, again to pass into the rapid ripple of its falling soft-sounding stream; still bare of tree and bush until at Polmood it becomes scantily fringed with alders and birches, remains of the old forest. The haughs here widen considerably, and soothe the eye with soft green pasture. Ever and anon a burn from its mountain glen joins and enriches the river; and thus is suggested the reserve of beauty and solitude in the valley of the Tweed, for the glen leads the eye upwards, between hills meeting hills from the opposite sides in a wonderful harmony and symmetry of fold, far away to the half-seen, dim, massive heights which form the broad and lofty background of the valley and feed the springs of the tributary waters. . . . Those long, rounded, far-spreading heights seldom visited, spaces of dreamy solitude and soul-subduing pathos, are never at any season of the

year without their charm. Early June decks them with a tender green, in which are set the yellow violet and the rock rose, and even the cloudberry lifts its snow-white blossom from the heart of the black peat-moss. Midsummer deepens and enriches the bloom, and brings the bracken in the lush green of the year. In early August the braes and moors are touched and brightened with the two kinds of the heatherbell ere they gradually flush deep in large breaks of the common purple heather. Autumn, late autumn, throws the fading beauty of tender colour over the heather bloom; and the bent of the Moorland, "the bent sae brown" of the old ballads, that knew and felt many a blood-stain in long gone foray and feud,—that bent amid which, in the very dawn of Border legend and poetry, the Queen of Faëry took her leave of Thomas of Ercildoune—throws in October days its tresses free to the wind with a waesome grace, touching the heart as with the hushed life of the old story. And in winter the snow wraps those hills in a robe so meet, that their statuesque outlines are seen and followed in their entireness and in their minute details, as at no other time; standing against the heavens in the clear relief of forms, new, as it were from the sculptor's hand.' From Broughton downwards the valley is much wider, the bottom being occupied by large tracts of fertile haughland, and though the bounding lines of heights continue, they are farther from the river. Owing to the windings of the stream, the heights seem at many points as if almost meeting and enclosing rich and fertile vales, as at Melrose, where the whole hollow seems from some points of view to be entirely shut in by hills. Many of the haughs here and elsewhere have rich orchards. 'After the first mile or two,' says Dorothy Wordsworth, in describing the course of the river from Peebles to Melrose in the beginning of the present century, 'our road was seldom far from the river which flowed in gentleness, though perhaps never silent; the hills on either side high and sometimes stony, but excellent pasturage for sheep. In some parts the vale was wholly of this pastoral character; in others we saw extensive tracts of corn ground, even spreading along whole hill sides and without visible fences, which is dreary in a flat country; but there is no dreariness on the banks of the Tweed—the hills, whether smooth or stony, uncultivated or covered with ripe corn, had the same pensive softness. In one very sweet part of the vale a gate crossed the road, which was opened by an old woman who lived in a cottage close to it; I said to her, "You live in a very pretty place." "Yes," she replied, "the water of Tweed is a bonny water." The lines of the hills are flowing and beautiful, the reaches of the vale long; in some places appear the remains of a forest; in others you will see as lovely a combination of forms as any traveller who goes in search of the picturesque need desire, and yet perhaps without a single tree; or at least if trees there are they shall be very few, and he shall not care whether they are there or not.' The constant character of the gently varying scenes 'was that of tender pensiveness; no bursting torrents when we were there, but the murmuring of the river was heard distinctly, often blended with the bleating of sheep. . . . The transitions of this vale were all gentle except one, a scene of which a gentleman's house was the centre, standing low in the vale, the hills above it covered with gloomy fir plantations, and the appearance of the house itself was gloomy. There was an allegorical air—a person fond of Spenser will understand me—in this uncheerful spot single in such a country,

"The house was hearsed about with a black wood."'

The absence of wood and the constantly pastoral appearance of the hills is not now so marked, for, from the point where the valley widens out, downwards, the skirting hills are fringed or covered with thriving plantations, mostly formed since the beginning of the present century. At some points, particularly about Neidpath and Floors Castle, these woods have been laid out with taste, but at other places the scenery has often suffered from the too regular and methodical nature of the planting. The bed of the river is almost everywhere composed of basaltic and sandstone rocks, or of pebbles of these imbedded in clear sharp sand, and the water is generally bright and clear.

See also Sir Thomas Dick Lauder's *Scottish Rivers* (Edinb. 1874); J. Russell's *Haigs of Bemersyde* (Edinb. 1881); Professor Veitch's *Border History and Poetry* (Glasg. 1878); the same author's *River Tweed* in volume issued to subscribers to the Royal Association for the Promotion of Fine Arts in Scotland (Edinb. 1884); Borrow's *Lavengro;* and, for sketches of the scenery along the upper part of the river, Black's *Strange Adventures of a Phaeton.*

Tweeddale. See TWEED, PEEBLESSHIRE, and YESTER.

Tweedsmuir, a large parish of SW Peeblesshire, containing, close to its northern extremity, the CROOK Inn, 6½ miles S of Broughton station, 16½ N by E of Moffat, 36 SSW of Edinburgh, and 12 SSE of Biggar, under which there is a post office of Rachan Mill. It is bounded NW and NE by Drummelzier, E by the Megget section of Lyne, SE and S by Moffat in Dumfriesshire, and SW and W by Crawford in Lanarkshire. Its utmost length, from N to S, is 8½ miles; its utmost breadth, from E to W, is 8⅝ miles; and its area is 51 square miles or 32,612¾ acres, of which 144 are water. The TWEED, here a mountain stream, rises in Tweed's Well at an altitude of 1500 feet above sea-level, and runs 10½ miles north-north-eastward, until, 3 furlongs N by E of the Crook Inn, it passes off into Drummelzier. It thus divides Tweedsmuir into two unequal portions, that to the E being very much larger than that to the W. During this course it is joined by twenty-three rivulets, which all have their source in Tweedsmuir, and the largest of which are FRUID WATER, rising at 2500 feet, and running 8 miles north-north-westward; TALLA WATER, rising at 2300 feet, running 6½ miles north-westward, and itself receiving GAMESHOPE Burn; and Hearthstane or HARESTANE Burn, rising at 2000 feet, and running 4⅛ miles north-westward. Another tributary, Polmood Burn, rises in Drummelzier at 2250 feet, and over the last 2¾ miles of its 4 miles' west-north-westerly course traces the Drummelzier boundary. The high road from Edinburgh to Moffat and Dumfries runs 9¾ miles up the parish close to the W bank of the Tweed, and just at the Lanarkshire boundary crosses from Tweeddale into Annandale by a 'col' 1334 feet high. In the extreme N, where the Tweed passes off into Drummelzier, the surface declines to 743 feet above the sea: and chief elevations to the W of the river, as one goes up the valley, are *Nether Oliver Dod (1673 feet), *White Knowe Head (1707), *Culter Cleuch Shank (1801), *Black Dod (1797), and *CLYDE Law (1789); to the E, Great Knock (2267), *BROAD Law (2754), Middle Dod (2179), Garlavin Hill (2383), Molls Cleuch Dod (2571), *Lochcraig Hill (2625), and *HARTFELL (2651), where asterisks mark those summits that culminate on the confines of the parish. 'It will be seen from your list of our mountains,' writes the Rev. John Dick, M.A., who has been minister from 1858, 'that Tweedsmuir embraces some of the highest summits in the Southern Highlands, and these are pierced by numerous deep glens of various scenery, some wildly moorland, some quietly pastoral, some ruggedly broken, and all bearing their contribution to the "siller Tweed." The whole parish is mountainous, but the upper vale of the Tweed toward Tweedshaws is comparatively bare and featureless, though even here there are often, especially up the tributary burns, close scenes of simple beauty which charm and surprise the solitary angler or pedestrian. Lower down the landscape is much more impressive in outline and more picturesquely diversified in detail. Near the village, which consists of only a few detached cottages, the road to St Mary's Loch crosses the old stone bridge of one arch, under which the confined Tweed, tumbling through a rocky chasm, plunges into a deep linn well known to angler and artist. To the left of the

river, high up on the hill, Oliver House, the seat of T. T. Stodart, Esq., the only resident landowner, looks out from its ancestral trees upon one of the finest views in Peeblesshire. Right below, on its prominent knoll between Tweed and Talla, stands the parish church, embowered in birch and elm and Scotch fir, up through which rises the taper spire, whose red freestone tints contrast harmoniously with the dark hues of the pine. Beyond the church, and flanking the right bank of the Talla, is the rounded form of Cockland, with its gentle slopes and green pastures; behind and above which towers the huge bulk of Broadlaw, one of the highest ridges in the south of Scotland. Between Cockland and Quarter Hill the beautiful vale of Talla stretches away up south-south-eastward until lost to the eye in the recesses of the lofty mountain ranges which form the horizon in that direction. The head of Talla Glen is a deep hollow or den, hemmed in on the one side by the steep spurs of the Broadlaw (otherwise called "Talla Banks"), and on the other by the beetling precipices and cleft chasms of the Gairlet, the immemorial haunt of the hunting falcon; while from the heights behind the shepherd's house, through a formidable fissure, Old Talla foams from linn to linn in a succession of striking falls (hence the name of the spot, Talla Linnsfoot), 4 miles SE of the church. From the little handrail bridge above the linns the scene is grand and impressive, resembling in its general features the Devil's Beef-tub, the head of Black's Hope, and the gorge of the Grey Mare's Tail. Here the Talla is joined by Gameshope Burn, a thoroughly Highland stream, which issues from a little black lochan in the wilds above, churns its way among opposing rocks down the steep descent of a dark and narrow gorge, whose sides "ascend like lofty wa's," and in whose clefts and corries the snow often lies till well on into the summer. This is Gameshope, associated with Covenanting memories, famous for ferns and trout, but most notable for its scenery, which, for stern and rugged grandeur, is not surpassed by any similar scene south of the Forth and Clyde, and may bear comparison with the more widely celebrated Glenogle in Perthshire.' The predominant rocks are greywacke and greywacke slate. The soil of the arable tracts is mostly a light loam, and that on many parts of the hills is a strong thick mould, formed of earth and moss. Less than 300 acres are in tillage; but, except for the cost of reclamation, much of the lower slopes of the hills might easily be brought under the plough. Large flocks of sheep, most of them Cheviots, are pastured; and hay-meadows and peat fuel are plentiful. Hawkshaw Castle, an ancient seat of the Porteous family, stood on the left side of Hawkshaw Burn, 5 miles SSW of the Crook Inn; and at the source of the Tweed is a spot called Tweeds Cross, from its having been the site of a pre-Reformation cross. Here in Feb. 1831 the guard and the driver of the Edinburgh mail coach perished in a gallant attempt to carry the letter bags through the drifted snow—an episode woven by Dr John Brown into his essay on *The Enterkin*. Other antiquities are noticed separately under Fruid, Giant's Stone, and Oliver Castle. Three proprietors hold each an annual value of more, and 6 of less, than £500. Tweedsmuir is in the presbytery of Peebles and the synod of Lothian and Tweeddale; the living is worth £275. The parish church, 1½ mile SSW of the Crook Inn, on the peninsula between Talla Water and the Tweed, crowns a knoll, called Quarter Knowe, by some supposed to be a tumulus, but really of alluvial formation. The present building, successor to one of 1648, was erected in 1874-75 at a cost of £1930, and contains 180 sittings. A Romanesque structure, it is in beautiful keeping with the surrounding scenery, and forms a commanding object from every point of approach. An old headstone in the graveyard bears the inscription—'Here lyes John Hunter, martyr, who was cruely murdered at Corehead by Col. James Douglas and his Party for his adherance to the word of God and Scotland's covenanted work of Reformation, 1685.' An excellent parish school, with accommodation for 45 pupils, has an average attendance of 35; and another little school for the children in the remote district of Tweedshaw, at the head of the parish, has a present attendance of 9. Valuation (1860) £5121, (1885) £7645, 18s. 6d. Pop. (1801) 277, (1831) 288, (1861) 196, (1871) 190, (1881) 215.—*Ord. Sur.*, sh. 16, 1864.

Twynholm, a post-office village and a parish of S Kirkcudbrightshire. The village is pleasantly situated in a little glen, 3 miles NNW of Kirkcudbright and 2 SSW of Tarff station, this being 6¾ miles SW of the post-town, Castle-Douglas.

The parish, which comprises the ancient parishes of Twynholm and Kirkchrist, united about 1654, is bounded N by Balmaghie, E by Tongland, SE by the broadening Dee and Kirkcudbright Bay (dividing it from Kirkcudbright), S by Borgue, and W by Borgue and Girthon. Its utmost length, from N by W to S by E, is 9 miles; its utmost width is 2¾ miles; and its area is 16$\frac{9}{10}$ square miles or 10,816½ acres, of which 95¾ are water and 103¾ foreshore. Culcaigrie Loch (2 × 1½ furl.; 375 feet) lies on the boundary with Tongland, Loch Whinyeon (4⅓ × 4⅓ furl.; 725 feet) on that with Girthon; and the latter sends off Glengap Burn, a headstream of Tarff Water, which, lower down, winds 2 miles south-south-eastward along the Tongland border, till it falls, near Compstone House, into the Dee. The Dee itself, here broadening into its tidal estuary, Kirkcudbright Bay, curves 3½ miles south-south-westward along all the south-eastern border, past Kirkcudbright town, to a point nearly opposite the southern extremity of St Mary's Isle. Chief elevations, from S to N, are Kirkeoch Hill (292 feet), Fuffock Hill (1050), and Bengray (1203) on the Girthon boundary. The general surface of the parish lies so comparatively high, that, if regarded in the aggregate, or as seen from a distance, it might be pronounced a tableland or elevated plain. But the parts of it fringing the Dee and Tarff Water comprise some haugh-ground; the southern and central parts are rolled into knolls and hillocks, with intervening vales and hollows; and only the northern parts rise into high hills, of pastoral character, and incapable of cultivation. Silurian rocks, comprising greywacke, greywacke-slate, and clay slate, predominate; and large granite boulders have now been nearly all removed. The soil of the arable lands is variously clay, sand, gravel, and moss—mostly light, dry, friable, and fertile. Nearly two-thirds of the entire area are capable of tillage; rather more than 300 acres are under wood; and the rest of the land is chiefly hill pasture. Antiquities are a number of Caledonian forts, the ruins of Compstone Castle, the site of an old castle, and probably of a nunnery at Nunton, and a circular mote near the parish church. Mansions, noticed separately, are Barwhinnock and Compstone; and the Earl of Selkirk owns nearly a third of the entire parish, 5 other proprietors holding each an annual value of £500 and upwards, and 5 of between £100 and £500. Twynholm is in the presbytery of Kirkcudbright and the synod of Galloway; the living is 18 chalders (half meal and half barley), with a glebe valued at £62 per annum. The parish church, at the village, is a neat Gothic edifice of 1818, with aisle, bell-cote, and 410 sittings. In the churchyard, which is surrounded by trees, is the grave of Andrew M'Robert, who, with four other Covenanters, was shot by Grierson of Lag on Kirkconnell Moor in Tongland parish. The public school, built in 1876-77, with accommodation for 184 children, had (1884) an average attendance of 76, and a grant of £73, 5s. Valuation (1864) £7563, 15s., (1885) £9783, 9s. 9d. Pop. (1801) 683, (1831) 871, (1861) 815, (1871) 717, (1881) 681.—*Ord. Sur.*, sh. 5, 1857.

Tynabruaich. See Tighnabruaich.

Tyndrum (Gael. *tigh-an-droma*, 'house of the ridge'), a small post-office village in Killin parish, W Perthshire, at the head of Strathfillan, within 7 furlongs of the Argyllshire border and 35 miles SE of Ballachulish, whilst its station on the Callander and Oban railway (1873-80) is 36½ miles E by N of Oban and 17¼ W by N of Killin station. Standing 700 feet above sea-level, it

is described by the Queen, under date 22 Sept. 1873, as 'a wild, picturesque, and desolate place in a sort of wild glen with green hills rising around. . . . There are a few straggling houses and a nice hotel at the station.' See CLIFTON and DALRY.—*Ord. Sur.*, sh. 46, 1872.

Tyne, a river of Lothian, originating in Edinburghshire, but belonging almost wholly to Haddingtonshire, and draining the larger part of its area. The stream—with the characteristic unsettledness of the nomenclature of Haddingtonshire streams—gathers many head-waters, and runs a large part of its course before its name ceases to be capricious and disputed. One early rivulet called the Tyne issues from a lochlet in the extreme E of Borthwick parish, and has a run of 7 miles northward before it enters Haddingtonshire. Over this distance it divides Borthwick on the W from Crichton on the E, sweeps past the village of Ford, and cuts Cranston into nearly equal parts; and after entering Haddingtonshire it describes the segment of a circle from a northerly to an easterly direction, over a distance of between 4 and 5 miles, through the parishes of Ormiston and Pencaitland, to a confluence ½ mile E of Easter Pencaitland, whence all debate ceases respecting the application of the name. Another rivulet, which claims to be the infant Tyne, is itself a collection of four or five head-streams, which rise in Borthwick, in Fala, in Soutra, and in the extreme S of Humbie, and, after courses of from 4 to 6½ miles, attain a general confluence ¾ mile below Humbie church; and after this confluence the stream proceeds 3 miles northward to join the competing head-rivulet of the Tyne—less than it in length of run, but considerably greater in volume of water. The Tyne, now of quite a fixed name, flows north-eastward, nearly across the centre of the lowlands of the county, to the sea at Tyninghame, 2¾ miles NW of Dunbar, performing a run of 16 miles, or 28 if measured from its remotest source. Till it enters Haddington parish it moves alternately on and near the boundaries between Pencaitland and Gladsmuir on the left and Haddington on the right; and it afterwards moves principally in the interior of Haddington, Prestonkirk, and Whitekirk. Its banks are studded with numerous and beautiful mansions, with the capital of the county, and with the villages of Pencaitland, Nisbet, Samuelston, Abbey, East Linton, Prestonkirk, and Tyninghame. Its current is placid, in many places dull and sluggish; but near East Linton it forms a kind of rapid, and tumbles over some broken rocks. Its whole course is through a rich agricultural country, abounding in all the embellishments of culture, but quite devoid of bold or striking features. Proportionately to its length of run it is a small stream, and viewed intrinsically it scarcely claims to be more than a rivulet; but it is subject to inundations of such suddenness and magnitude, as, if not restrained by embankments, would work enormous havoc. (See HADDINGTON.) The tide affects it over a distance of 2 miles, and expands at high-water into an extensive lake on what are called the Salt-Greens, in front of Tyninghame House. The Greens form a very fine feature in the grounds around that magnificent residence, and are now a glittering sheet of water, and now an expanse of verdant sward dotted over with sheep, and, in summer, thickly powdered with sea-pink. The river is of much value for driving corn-mills. Its trout fishing is often very good; and salmon and sea-trout also ascend it.—*Ord. Sur.*, shs. 32, 33, 1857-63. See Sir T. Dick Lauder's *Scottish Rivers* (Edinb. 1874).

Tyne, an important English river, two of whose head-streams rise in the S of Roxburghshire, on the eastern slope of CARLIN-TOOTH, near the source of Jed Water, and run 5½ furlongs eastward through Southdean parish to the Border.

Tynecastle, an Edinburgh district, on the road from the Haymarket to Gorgie, near the Dalry Cemetery, and 2 miles SW of the General Post Office. It is the seat of the Albert Works, directed by Mr Wm. Scott Morton, an architect of special skill in decorative work. Here, besides stained glass, painted tiles, art furniture, etc., is manufactured the beautiful 'Tynecastle tapestry,' which Mr Scott Morton invented, and which consists of coarse paper-backed canvas, dyed and decorated in a great variety of ways to suit for walls, ceilings, or friezes.

Tynehead, a post office and a station in Crichton parish, Edinburghshire, on the Waverley route of the North British railway, 16 miles SE of Edinburgh.

Tyninghame, an ancient parish of Haddingtonshire, annexed to WHITEKIRK since 1761, and containing Tyninghame village, 2 miles NE of Prestonkirk or East Linton, under which it has a post office. The name, which means 'the hamlet on the Tyne,' graphically describes the position of the village, 300 yards from the northern margin of the Tyne, on a beautiful piece of ground which gently slopes to the river's edge. The original church was founded by Bathere the anchorite, better known as St Baldred of the Bass, who died in 756, when, according to Bellenden, 'the parishioners of Auldham, Tyningham, and Preston contended whilk of them should have his body to decore their kirk; but on the morrow they fand, by miracle of God, three beirs with three bodies, na thing discrepant frae others in quantity, colour, nor raiment. And so the body of this haly man lies be miracle in all the three kirks.' In 941, according to Hoveden and the *Chronica de Mailros*, Anlaf the Dane spoiled the church of St Baldred, and burned the village of Tyninghame; and in 1094 a charter of Duncan granted to St Cuthbert, *i.e.*, to the church of Durham, Tyninghame and five other places in Haddingtonshire, three of which—Aldham, Scougal, and Knowes—are in the present united parish. The church of Tyninghame enjoyed of old the privilege of sanctuary. Patrick de Leuchars, who was rector of it in the reign of David II., rose to be Bishop of Brechin and chancellor of Scotland; and George Brown, who was rector in the reign of James III., was raised by the party who overthrew that monarch to be Bishop of Dunkeld, and joined them in hunting the king to death on the field of Sauchieburn. The manor of Tyninghame, with the patronage of the church, anciently belonged to the Bishops of St Andrews, and was included in their regality lying on the S side of the Forth. In 1553, it appears to have been conferred by Archbishop Hamilton on St Mary's College in St Andrews; but in 1565 a complaint was made by the parishioners to the General Assembly, that though they paid their tithes to the college, they had as yet received from it the benefit neither of preaching nor of administration of sacraments. The manor, held for a time under the archbishop by the Earl of Haddington, in 1628 was obtained by him in chartered right under the Great Seal; and it thence became the home-domain, the beautiful seat, gradually the richly embellished forest and park-ground of the noble family. The estate is famed in the E of Scotland for the extent and singular beauty of its woods and its holly-hedges. More than 800 acres wave with trees, chiefly of the various hardwood species, and arranged in the most tasteful forms of forest. In 1705, Thomas, sixth Earl of Haddington, instigated by his countess, the sister of the first Earl of Hopetoun, commenced planting operations on a great scale; and he must, in reference to their date and their influence, and to the efforts which he used to provoke imitations of his example, be regarded as the originator of the thousands of fine expanses of modern plantation which now so generally beautify Scotland. His first exploit was to plant Binning Wood, a forest of 400 acres, over the whole face of what was then a moorish common called Tyninghame Moor. The trees were arranged in thirteen rides or avenues, converging at four different points in an open glade. The Earl next drew sheltering belts along the enclosures of fields; and then—boldly putting to the test a received opinion, that no trees would grow near the shore—he planted some expanses of sandy ground upon the beach. Finding that his trees grew and were thriving, he determined to 'fight no more with the cultivation of bad land, but to plant it all.' Thus arose a forest which

while the earliest modern one in Scotland, is excelled by none in the lowlands for the beauty of either its trees or its arrangements. The holly-hedges were planted by the same earl, and they more than rival the forest in fame. Aggregately extending to about 9000 feet, they have a breadth of 10 to 13 feet at the base, and a height of from 15 to 25 feet; they are arranged in double rows, flanking very spacious walks or avenues; and they are kept with great care, and in constant conservation. Numerous single hollies, each about 50 feet high, and of proportionate circumference, are interspersed with the forest, and enliven its aspect. Vast damage was done by the gale of 14 Oct. 1881, which felled no fewer than 30,000 trees on the estate, including nearly all the beeches surrounding the bowling-green, the 'Trysting Tree' (a beech 21½ feet in girth, and bearing date 1623), etc. On 26 Aug. 1878 the Queen drove through the park, which she describes as 'really beautiful, reminding one of Windsor and Windsor Forest.'

Tyninghame House stands ¼ mile from the N bank of the Tyne and 2¾ miles NE of East Linton. Though a patchwork of pieces added by successive Earls, it was so altered and enlarged about 1829 by Mr Burn, who re-faced the whole with native red sandstone, as to present the appearance of a large and handsome mansion, semi-Elizabethan, with small Scotch towers, and a beautiful terrace garden. The interior retains, with little alterations, its original form, and is adorned with portraits of Queen Mary and James VI., of the second Earl by Vandyke, of the eighth Earl and Countess and of Gen. Lord Rothes by Sir Joshua Reynolds, of Canning by Lawrence, etc. Between the mansion and the river, embosomed in a clump of wood, are two fine Norman arches, the only remains of the ancient church, and now the family cemetery of the Earls. Near the house, too, is a fine obelisk to the sixth Earl and Countess. George-Arden-Baillie-Hamilton, eleventh Earl since 1619 (b. 1827; suc. 1870), holds 27,790 acres, valued at £34,445 per annum, viz., 8302 in Haddingtonshire (£13,678, 10s.), 14,279 in Berwickshire (£15,099, 6s.), 4708 in Roxburghshire (£5079, 4s.), and 501 in Lanarkshire (£588).—*Ord. Sur.*, sh. 33, 1863. See Mellerstain, Lennel House, Jerviswood; the Rev. A. I. Ritchie's *Churches of St Baldred* (Edinb. 1881); and Jn. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Tynron, a hamlet and a parish of Upper Nithsdale, W Dumfriesshire. The hamlet stands, 360 feet above sea-level, 2¼ miles NE of Moniaive and 5 WSW of Thornhill, under which it has a post office.

The parish is bounded N and NE by Penpont, SE by Keir, S and SW by Glencairn, and NW by Dalry in Kirkcudbrightshire. Its utmost length, from WNW to ESE, is 9⅞ miles; its breadth varies between 9 furlongs and 4 miles; and its land area is 24½ square miles or 15,683 acres. Shinnel Water, rising in the north-western extremity at an altitude of 1500 feet, runs 10¾ miles east-south-eastward through all the length of the parish, then 2 miles north-north-eastward along the Keir border, till it falls near Scar Bridge into Scar Water, which itself flows 3⅞ miles south-eastward along the boundary with Penpont. In the extreme E, at the confluence of Shinnel and Scar Waters, the surface declines to 225 feet above the sea; and chief elevations to the N of Shinnel Water, as one goes up the valley, are Tynron Doon (945 feet), Auchengibbert Hill (1221), Bennan (1105), Lamb Craigs (1367), *Hard Knowe (1502), and *Ox Hill (1655); to the S, Maqueston Hill (1063), Thistlemark Hill (1079), *Glenskelly Hill (1493), *Ball Hill (1778), Lamgarroch (1878), and *Colt Hill (1961), where asterisks mark those summits that culminate on the confines of the parish. The surface mainly consists of the glen or strath of the Shinnel, and of two ranges of hills which form its screens. The hills for the most part are green, and constitute capital sheep-pasture. Very much land which, in other circumstances, would have remained pastoral and unenclosed, has, in consequence of the vicinity of lime at Barjarg and Closeburn, been reclaimed and subjected to the plough. Very few acres are flat or strictly low ground, and less than one-twentieth of the entire area is in tillage. The soil is rather thin and sandy; and the crops are neither early nor luxuriant. Upwards of 400 acres are under wood, chiefly natural. Greywacke is the prevailing rock; clay slate occurs in one small bed at Corfardine, and was at one time worked; and flinty slate occurs in a small bed at Shinnelhead. The most interesting object in the parish is the Dun or Doon of Tynron. This is a beautiful steep and conical hill, which, rising up on the peninsula of Scar and Shinnel Waters, terminates the northern hill range of the parish, and commands an extensive and delightful prospect. Its summit, a small piece of table-land, bears marks of having been the site of a fortified castle, and, during last century, supplied from the ruins many building stones which must have been procured at 4 or 5 miles' distance, and laboriously carried up the difficult acclivity. Ditches round the top are still partially traceable; and dense woods anciently covered its sides, and stretched away from its base. Robert Bruce was conducted to the fortalice on the hill by Kirkpatrick of Closeburn, and probably made it his retreat for some time after killing the Red Comyn at Dumfries (1306). James Hogg, the 'Ettrick Shepherd,' was for a short time tenant of the Duke of Buccleuch's farm of Corfardine —a very unfortunate tenancy. A Roman road leads from the Doon along the face of the range to near the head of the parish, and is, in many places, quite bare of grass. The road from Moniaive to Thornhill crosses the SE end of the parish; and two roads go up the Scar and the Shinnel. The principal landowner is the Duke of Buccleuch. Tynron is in the presbytery of Penpont and the synod of Dumfries; the living is worth £425, having been augmented in 1881. The parish church is a neat edifice, built in 1837, and containing 314 sittings. The ancient church was a vicarage of the monks of Holywood. A public and an endowed school, with respective accommodation for 36 and 63 children, had (1884) an average attendance of 18 and 42, and grants of £29, 7s. and £48, 17s. Valuation (1860) £4498, (1885) £5999, 11s. Pop. (1801) 563, (1831) 493, (1861) 446, (1871) 381, (1881) 416.—*Ord. Sur.*, shs. 9, 15, 1863-64.

Tyree (Gael. *tirith*, 'land of corn'), an island of the Argyllshire Hebrides, 2 miles SW of Coll, 13½ W of Treshinish Point in Mull, 19 NW of Iona, and 37¼ SE of Barra. Its length is 14 miles; and its breadth varies between ⅝ mile and 6 miles. It appears to have been, in Columban times, part of the patrimony of the Church, and to have supplied Iona with considerable quantities of grain; and hence it is supposed to have acquired its name. Another ancient name, still applied to it in romantic tales, is *Rioghachd bar fo thuin*, 'The kingdom whose summits are lower than the waves;' and this aptly describes it as the lowest and the flattest of the Hebrides, and as so curiously washed by the sea, that from one side the waves may often be seen on the other rising several feet above the level of the rocks. The shores have frequent though not deep indentations, and consist of sandy bays, separated by ridges of rock. The Bay of Gett, on the E side, measures about 2½ miles round the head, and has so firm a sandy beach that a horse at full gallop makes an impression not above ½ inch deep. Upwards of 20 fresh-water lakes together cover some 600 acres. From one of the larger lakes flows the only stream, which, however, is powerful enough to drive a mill. At the northern extremity of the island are considerable accumulations of blown sand. In the S the rocks look so rarely up from the surface as to form only a few scattered elevations; but towards the N they become numerous, and at length occupy the greater part of the surface, preventing the cultivation of the soil, and condemning it to perpetual pasturage. A few low heights are formed on the rocky ground, ranging from 30 to 60 feet in altitude; and three separate hills rise near the southern extremity to a maximum height of 400 feet. All the rest of the island has a mean eleva-

tion above high-water mark of scarcely 20 feet; and, as it has no tree, and scarcely an enclosure, it is swept with unrestrained violence by the westerly winds, and often so scourged by gales that sown seed and loose dry soil are dispersed, and matured crops of corn and potatoes broken down. A remarkable plain, called the Reef, near the centre of the island, and 1562 acres in area, is as flat as the sea, and has scarcely a swell or even a stone; and, from dread of the effect of the winds should the surface be once broken, it is kept in a state of perpetual pasture, and offers a singular spectacle of rich verdure. The soil is in general light, consisting of sand, calcareous earth, and moss. The sand very greatly predominates; but, in its general diffusion, it is of a calcareous nature, consisting, together with quartz, of a large proportion of pulverised sea-shells. The island, in consequence, is one of the most fertile tracts of land in the Hebrides. Its fertility is greatly aided, too, by a regular and constant moisture, occasioned partly by its flatness and partly by its peculiar climate and exposure. The regularity of the moisture is everywhere proved by the flourishing growth in the corn-fields of the yellow iris, the *polygonum viviparum*, and other aquatic plants. Such natural pastures as, from their soil and position, have least humidity are surprisingly rich, and produce white clover in such abundance as almost to exclude the grasses. Marshes are unknown; and bogs are so limited that the inhabitants are under the necessity of importing their fuel from Mull, and in some instances have been driven to the ruinous resource of paring the soil down occasionally to the subjacent rock. So wondrously destitute is the island of wood, that, excepting one species of willow, it may be said not to possess a ligneous fibre. Yet the total want of shelter, while in many respects injurious to agriculture, combines with the level nature of the surface to occasion so equable a distribution of sand-drift by the winds, that, instead of low lands being overwhelmed as in many places throughout the other Hebrides and the Shetland Islands, the drift brings a perpetual renewal of calcareous manure, and scarcely anywhere accumulates to such a degree as to choke vegetation. At the northern extremity, however, as in the S end of Coll, protuberating rocks afford local shelter, and occasion the sand to accumulate. Agricultural practice has undergone some improvements, but is still in a comparatively rude condition. About 5850 acres are in tillage; and about 10,725 are pastoral or waste. The produce of all kinds of crops is comparatively small. The rearing of black cattle is a chief employment; and the exportation of them a principal means of support. Poultry and eggs also are largely exported. Fishing, contrary to the prevailing practice in the Hebrides, engages comparatively little attention. Owing to a rapidity of increase in the population, and to the ruin of the kelp manufacture on which a large proportion of them depended mainly for subsistence, Tyree has shared to a grievous extent in the distress with which so many of the Hebridean islands have of late years been visited. The Duke of Argyll is the sole proprietor. The predominant rock of the island is gneiss; but this abounds with veins of granite, and imbeds masses of primitive limestone. One of the limestone masses, long and favourably known for the flesh-coloured marble into which it has been cut for ornamental architecture, is an irregular rock, 100 feet in diameter, lying among the gneiss without stratification or continuity. In consequence of its hardness, even though cheaper, in spite of that inconvenience, than many foreign marbles of far inferior beauty, it has lost the patronage of public caprice, and ceased to be in request. Its very tint is finely relieved by the dark green crystals of augite and hornblende which are imbedded in it. The deposit is quite unstratified. Another mass, ten times the size of the former, and equally irregular, resembles the marble of Iona in whiteness, texture, and fracture, yet is generally impure, and seems to have been quarried only for building dikes. The Hill of Ceanmharra, situated at the SW point of the island, and presenting a mural face to the sea, is perforated with a great number of caves, some of which are large and scoured by the surge, while all are frequented by flocks of sea-fowls. Remains of no fewer than 39 watch-towers or forts, within view of one another, encircle the coast of Tyree and Coll; and there are 9 or 10 standing-stones, besides minor antiquities. The inhabitants relate many Fingalian and other tales of battles and chieftains, and even affect to point out the graves of the heroes of their legends. On an islet, now converted into a peninsula, anciently stood a square turreted castle, accessible only by a drawbridge; and on its ruins was erected, in 1748, a house for the factor of the Duke of Argyll. Fairs are held on the Wednesday in May before Mull, on the Monday in August before Mull, and on the Wednesday in October before Mull. The island has a post office under Oban, with money order and savings' bank departments, and communicates weekly by steamer with the Clyde. Tyree, to which Coll was annexed from 1618 to 1866, is now a separate parish, in the presbytery of Mull and the synod of Argyll; the living is worth £317. The church was built in 1776, and enlarged in 1786, and contains 475 sittings. There are Free and Congregational churches in Tyree; and four new public schools—Cornaigmore, Hillipol, Ruaig, and Scarnish—with respective accommodation for 136, 120, 105, and 70 children, had (1884) an average attendance of 88, 73, 63, and 48, and grants of £93, 17s. 5d., £27, 12s. 5d., £58, 1s. 4d., and £31, 14s. Valuation (1885) £6177, 16s. Pop. (1831) 4453, (1861) 3201, (1871) 2834, (1881) 2730.

Tyrie, a parish of Buchan, N Aberdeenshire, whose church stands close to the northern border, 3½ miles S of Rosehearty and 5 SW of Fraserburgh, under which there is a post office. Containing also the town of New Pitsligo, the parish is bounded N by Aberdour and Pitsligo, E and SE by Rathen, Fraserburgh (detached), Aberdour (detached), and Strichen, S by New Deer, and W and NW by Aberdour. It utmost length, from NE to SW, is 7⅝ miles; its breadth varies between 1¼ and 3⅝ miles; and its area is 17½ square miles or 11,193½ acres, of which 11¾ are water. Streams there are none of any size; but the drainage of the northern district goes to the Water of Philorth, and of the rest of the parish to either North or South Ugie Water. The surface is somewhat hilly, declining near the parish church to 148 feet above sea-level, and rising thence to 411 feet near Blackrigg, 454 near Monkswell, and 651 at the Hill of Turlundie. Granite is the predominant rock; and the soil on the hills is comparatively shallow, in the valleys is generally deep, and, except where mossy or moorish, is mostly a fertile reddish-coloured loam. Great improvements have been effected during the last sixty years in the way of draining, reclaiming, fencing, and building. Several tumuli, cairns, and Picts' houses have been demolished, as well as a mote-hill near the parish church, in whose porch is the 'Raven Stone,' which formed the foundation stone of the ancient church. That church, St Andrew's or the White Kirk of Buchan, is said to have been founded about the year 1004, when a Mormaer of Buchan had routed a Danish host on the neighbouring hills. Boyndlie, noticed separately, is the only mansion; and the property is mostly divided among three. Giving off its south-western portion to the *quoad sacra* parish of New Pitsligo, Tyrie is in the presbytery of Deer and the synod of Aberdeen; the living is worth £203. The present church, built in 1800, contains 400 sittings. Tyrie public and Boyndlie Episcopalian schools, with respective accommodation for 156 and 129 children, had (1884) an average attendance of 89 and 68, and grants of £87, 7s. 6d. and £58, 4s. Valuation (1860) £6206, (1885) £10,300, 11s. 2d. Pop. (1801) 1044, (1831) 1613, (1861) 3043, (1871) 3446, (1881) 3391, of whom 871 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 97, 87, 1876.

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UAMH MHOR or **UAMVAR.** See KILMADOCK.

Uddingston, a thriving town of recent growth in Bothwell parish, Lanarkshire, near the right bank of the Clyde, 3¾ miles NNW of Hamilton, and 7½ ESE of Glasgow. Standing amid pleasant environs, and commanding a brilliant view down the valley of the Clyde, it chiefly consists of modern, well-built houses, occupied by Glasgow merchants, carries on an extensive manufacture of agricultural implements (the 'Wilkie's plough' dating from 1800), and has a post office, with money order, savings' bank, and telegraph departments, a branch of the Bank of Scotland, stations on the Caledonian and North British railways, gasworks, a public hall, a sessional school, etc. The Established church, built as a chapel of ease in 1873 at a cost of over £4000, was raised to *quoad sacra* parochial status in 1874. It is an Early English structure, with 850 sittings, and a tower and spire 100 feet high. The Free church, built in 1876 at a cost of £3300, contains 500 sittings; and there are also a U.P. church (450 sittings), a handsome Early Gothic Evangelical Union church (1880; cost over £1500; 400), and St John the Baptist's Roman Catholic chapel-school (1883; 600). Two early British urns were dug up in 1885. Pop. of *q. s.* parish (1881) 4086; of town (1841) 703, (1861) 1256, (1871) 1997, (1881) 3542, of whom 1818 were females. Houses in town (1881) 673 inhabited, 53 vacant, 19 building.—*Ord. Sur.*, sh. 31, 1867.

Uddington. See DOUGLAS.

Udny, a village and a parish of Aberdeenshire. The village stands 283 feet above sea-level and 2¼ miles NW of Udny station on the Formartine and Buchan section (1861) of the Great North of Scotland railway, this being 5 miles SSW of Ellon, 8¼ N by E of Dyce Junction, and 14½ NNW of Aberdeen, under which there is a post and railway telegraph office. There is also a branch (1875) of the Aberdeen Town and County Bank; the Formartine Agricultural Association (1829) holds an annual show of live-stock at the Green of Udny; and horse, cattle, and sheep markets are held at Udny station on the last Thursday of every month.

The parish, formed in 1597 out of portions of Ellon, Tarves, Logie-Buchan, and Foveran, is bounded N by Tarves, E by Ellon, Logie-Buchan, Foveran, and Belhelvie, S by New Machar, SW by Fintray, the Banffshire (detached) section of New Machar and Keithhall, and NW by Bourtie and Tarves. Its utmost length, from N by E to S by W, is 6⅞ miles; its breadth varies between 1¼ and 6⅝ miles; and its area is 18 square miles or 11,554⅞ acres, of which only 6½ are water. Streams there are none of any size; but the drainage is carried eastward and north-eastward to the Ythan by four or five little rivulets. In the N, at the Mill of Dumbreck, the surface declines to 83 feet above sea-level; and thence it rises very gently to 309 feet at Newseat, 310 at West Coullie, and 620 at the Changehill on the south-western border. Granite, of a pale greyish hue, has been largely quarried; and an inferior limestone was at one time worked. The soil, in most parts a deep loam incumbent on granite or clay, is here and there naturally marshy, but has been greatly improved by draining. About one-fifteenth is either pastoral or waste; nearly one-thirtieth is under wood; and almost all the remainder is in tillage. Udny Castle, 3 furlongs NNE of the village, is a massive three-storied tower, 46 feet long, 35 broad, and 71 high, with walls 9 feet in thickness. It is supposed to have been founded about the beginning of the 14th century; but a large and handsome addition has been made by the present proprietor, John Henry Fullarton Udny, Esq. (b. 1853; suc. 1861), the descendant of a long line of lairds, who holds 9225 acres in the shire, valued at £9041, 7s. per annum. The mansions of PITMEDDEN and PITTRICHIE are noticed separately; and, in all, 10 proprietors hold each an annual value of £500 and upwards, 6 of between £100 and £500. Udny is in the presbytery of Ellon and the synod of Aberdeen; the living is worth £360. The parish church, built in 1821, contains 750 sittings. There is also a Free church; and two public schools, Pitmedden and Udny Green, with respective accommodation for 125 and 185 children, had (1884) an average attendance of 110 and 81, and grants of £102, 19s. and £67, 18s. Valuation (1860) £10,063, (1885) £13,840, 16s. 11d., *plus* £998 for railway. Pop. (1801) 1242, (1831) 1309, (1861) 1668, (1871) 1663, (1881) 1638.—*Ord. Sur.*, shs. 77, 87, 1873-76.

Ugie, a river of NE Aberdeenshire, issuing from a lochlet near Windyheads, in Aberdour parish, within 3 miles of the N coast, and running 21 miles, generally in a south-easterly direction, to the sea, 1¼ mile NW of the town of Peterhead, on the E coast. It runs, in its upper stretches, through Aberdour, Tyrie, the detached district of Aberdour, and Strichen; it next divides Strichen and Lonmay, on its left bank, from New Deer and Longside on its right; and it finally passes through Longside, and between St Fergus and Peterhead, to the sea. Its chief tributary, the Water of Deer or South Ugie Water, which joins it in Longside, has a course of 16½ miles, and almost contests the palm of being the parent stream. The Ugie is navigable for about 1½ mile from its mouth; and, as its lower course is slow and smooth, it might easily, and at a small expense, be rendered navigable for 6 or 8 miles.—*Ord. Sur.*, shs. 87, 97, 1876.

Uie or **Eye.** See KNOCK.

Uig, a Hebridean parish of Ross-shire, whose church stands near the W coast of Lewis, 34 miles W by S of the post-town, Stornoway. The parish comprehends the FLANNAN ISLES, the islands of BERNERA, MEALISTA, and PABA, with some smaller islands, but consists mainly of the district of Uig proper and part of the district of CARLOWAY or CALLERNISH on the mainland of Lewis. The district of Uig-proper is bounded N by the ocean and Carloway, E by Stornoway, SE by Lochs, S by Harris and Loch Resart, and W by the ocean. Its utmost length, from NE to SW, is 22½ miles; its utmost breadth is 17¼ miles; and its area is 211⅔ square miles or 135,471·113 acres, of which 10,107·312 are water and 2568·965 foreshore. The north-western division of Uig proper is cut into a labyrinth of islands and peninsulas by the numerous and intricate ramifications of Loch Roag. A large and comparatively little indented peninsula between that sea-loch and Loch Resart forms the south-western division, and sends out two prominent headlands, the most westerly ground in the island. Between these promontories, the more northerly of which bears the name of Gallon Head, and which are 3 miles asunder, occurs the Bay of Uig, the most important bay in the parish. This bay penetrates the interior to the extent of 3¼ miles, and has a mean breadth of about 1 mile; and while quite exposed, over 2 miles of its extent, to the tremendous westerly gales and surges of the Atlantic, it afterwards suddenly contracts, and then shoots out into a series of sheltered creeks. Freshwater lakes are very numerous in most parts of the interior, and reflect from their surface the brown, bleak features of dismal moors. The only noticeable one is Loch Langabhat (8⅓ miles × 7 furlongs), chiefly on the boundary with the aptly-named conterminous parish of LOCHS. The lakes, excepting this one, rarely attain 6 miles in circumference; they abound with small trout; and, owing to the moorishness of the grounds which their feeders drain, their water has a brownish colour. There are four rivulets in which a few salmon are caught. The seas and bays on the coast abound with cod, ling, dog-fish, coal-fish, and most kinds of shell-fish, and are frequented by English vessels for supplies of lobsters. Mealasbhal (1750 feet) is the highest of several hills that exceed 1500 feet above sea-level; but the parish generally, though loftier, as a whole, than any other in Lewis, exhibits, throughout the interior,

a continuous assemblage of low hills and flat moors. Its seaboard is, for the most part, low, has a sandy soil, and contains nearly all the cultivated land. The soil of the interior is first thin, light, and mixed with a little clay, and, farther back, almost wholly moss; yet it is largely capable of improvement, and with the aid of sea-weed for manure, produces forced crops. The proportion which arable grounds and good pasture bear to the moors is little, if any, more than as 1 to 20. Notwithstanding the remoteness of its situation, the parish has been strongly affected by the change of proprietorship and the new system of improvement noticed in our article on LEWIS; but, all the same, it has figured prominently in the recent crofter agitation. Uig is in the presbytery of Lewis and the synod of Glenelg; the living is worth £195. The parish church was built in 1829, and contains 1000 sittings. There are two Free churches—the one of Uig, the other of Carloway; and seven public schools of recent erection, with total accommodation for 696 children, had (1884) an average attendance of 424, and grants amounting to £367, 9s. Valuation (1860) £2741, (1885) £5324, 17s. Pop. (1801) 2086, (1841) 3316, (1861) 2878, (1871) 3143, (1881) 3489, of whom 3398 were Gaelic-speaking.—*Ord. Sur.*, shs. 104, 105, 98, 99, 1858.

Uig, a village in Snizort parish, Isle of Skye, Inverness-shire, at the head of Uig Bay, 14 miles NNW of Portree, under which it has a post office, with money order, savings' bank, and telegraph departments. Here also are a steamboat pier and a good hotel. Great damage was done to the place by the 'big flood' of Oct. 1877. Triangular Uig Bay measures 1 mile across the entrance, and 1½ mile thence to its inmost recess.

Uist, North, an island and parish of the Outer Hebrides, Inverness-shire. The island is bounded on the W and NW by the Atlantic Ocean, on the NE by the Sound of Harris, on the E by the Little Minch, on the S, separating it from Benbecula, by a narrow, complicated, shallow strait, densely packed with isles and islets, and partly fordable between low water and half tide. Its greatest length, from E by N to W by S, is 18 miles; its greatest breadth, in the opposite direction, is 13¾ miles; its breadth, over great part, does not average more than 6½ miles; and its land area appears to be considerably less than 80 square miles. The entire eastern half is a labyrinth of land and water cut into innumerable peninsulas and islands of every imaginable form, partly by the ramifications of Lochs EVORT and MADDY, inlets of the sea, and partly by the existence of ragged and many armed fresh-water lakes; and, looked at from almost every vantage ground, it seems to defy description or exploration, so intricate and broken is the outline. The whole of the territory thus cut into fragments is a dreary, flat, marshy moorland—'a brown, peaty, and boggy tract,' says Dr Macculloch, 'so interspersed with lakes and rocks as to be nearly impassable, and producing a scanty and wretched herbage for a few animals during the driest months of summer, while in the winter it is resigned to wild geese, ducks, and swans, who divide its waste and watery region with the sea-gulls which the ocean can no longer protect or feed.' Yet the tract is not all so low as its general character would seem to indicate; but presents, in a frequently broken belt of 2½ miles mean breadth along the coast, a range of hills, which gradually rise from the N to the S, reaching at one point, Ben Eval, to an altitude of 1133 feet. The western portion of the island is, comparatively speaking, continuous land; and sends up, in lines from SE to NW, three distinct groups or ranges of heights. One of these ranges bounds the Sound of Harris; and, though lifting its chief summits of Ben Breach and Ben More to nearly 1000 feet of altitude, is of tame appearance. The second range extends almost from end to end of the district along very nearly its middle, and sends up its principal eminence, Ben Croghan, to a height of 1500 feet. The third range is a prolonged and irregular group of much less elevation than the others, of a smooth and undulating surface, and with declivities which fall off in gentle slopes to the SW. A belt of uneven low land between this last group and the sea is exceedingly beautiful in summer and autumn, produces luxuriant crops of oats and barley, and forms both the chief and the most profitable area of arable ground in the island. Its soil is naturally a mixture of clay and peat, and, jointly by culture and by the admixture of drift sand from the coast, it has become a rich and fertile mould. All its seaboard, with the exception of a few bold rocky headlands, consists chiefly of various pulverised shells, which are wafted over all the tract by the powerful western winds, and fertilise it with all the power of rich lime manure. Yet beautiful and productive as this district generally is, it often in winter suffers such denudation of its more tender and valuable grasses, by the action of rain, frost, and storms, that the cattle which feed upon it can find no sustenance, and must be sustained by the stores of the corn-yards or left to perish. A curious cave called Sloch-a-choire is at Tighary Point near the parish church, and 3 miles distant at Scolpeg is a larger, but less curious one. There are numerous rude monuments and ruins, probably of Scandinavian origin, to which various traditions are attached. Gneiss forms the great bulk of the island; argillaceous schist is the chief constituent of the range of heights on the eastern shore; and trap occurs, among the same heights, in numerous veins. The chief useful mineral, apart from the building material of the rocks, is a species of bog-iron accompanied by pyrites which, with the assistance of tormentil, galium, lichens, and other native plants, is employed by the natives for dyeing. The sea-lochs and bays abound with marine fish; and the fresh-water lakes contain plenty of trout, and are frequented by flocks of wild geese, ducks, and swans. The inhabitants have shared very largely in the miseries so common throughout the Hebrides and the Highland shores of the mainland, resulting from bad husbandry, defective harvests, precariousness of the fisheries, and destruction of the kelp trade. Hence North and South Uist have figured prominently in the Crofter agitation of 1884-85.

The parish comprehends the island of North Uist, a number of inhabited islands lying adjacent to North Uist or near it, and a great many neighbouring isles and islets, some of them covered with verdure and suitable for pasture, others bare rocks, valuable only for the seals which frequent them. The principal islands, additional to North Uist itself, are Kirkebost, Illeray, Baleshare, Grimisay, Vallay, and Orinsay, all connected with the island of North Uist by dry sands at low water; Rona, less than 1 mile to the SE; Boreray, about 2 miles to the N; and Heisker, about 10 miles to the W. It contains the post office stations of LOCHMADDY and Carinish. It is in the presbytery of Uist and synod of Glenelg; the living is worth £185. The parish church was built in 1764, and contains 400 sittings. There are a *quoad sacra* parish church at Trumisgarry, an Established mission church at Carinish, and Free churches at Paible and Carinish. Twelve board schools, all of recent erection, with total accommodation for 655 scholars, had (1884) an average attendance of 350, and grants amounting to £366, 4s. 3d. Valuation (1860) £4135, (1884) £5483. Pop. of island (1841) 3788, (1861) 3034, (1871) 3222, (1881) 3371; of parish (1801) 3010, (1831) 4603, (1861) 3959, (1871) 4107, (1881) 4264, of whom 4134 were Gaelic-speaking, and 3383 were in North Uist ecclesiastical parish.

Uist, South, an island and a parish of the Outer Hebrides, Inverness-shire. The island is bounded on the N by a strait which separates it from Benbecula, and is shallow, packed with rocks and flat islets, surpassingly intricate, and nearly dry in one part at low water; on the E by the Little Minch; on the S by a sound from 5 to 7½ miles broad, which separates it from Barra, contains several considerable isles, and is interspersed with sunk rocks; and on the W by the Atlantic Ocean. Its greatest length, from N to S, is 22 miles; its greatest breadth is 7¾ miles; and its area, including interior and intersecting waters, is about 110 square

miles. The northern district, measuring about 14 square miles, bears the separate name of Iachdar; forms practically a separate island, divided from the rest of South Uist by the sea-lochs Skiport and Gamaslechan, entering from respectively the E and the W and uniting in the middle; and is a low flat tract, cut into fragments and shreads by slender, long, and forking bays. The eastern district, all southward from Loch Skiport, is predominantly mountainous, hilly, and mossy; it is divided into three sections by the sea-lochs Eynort and Boisdale cutting completely across it at distances of respectively about 7½ and 12 miles S of Loch Skiport; and is further divided into peninsulas by their many and intricate ramifications. The section between Loch Skiport and Loch Eynort comprises between a third and a fourth of the entire land area of the island, and possesses the two highest summits in the island, namely Mount Hecla and Ben More (2035 feet). The section between Loch Eynort and Loch Boisdale comprises an area of about 10 square miles, and is comparatively flat, the hills with a few exceptions not rising much above 500 feet. The section S of Loch Boisdale comprises a land area of about 10 square miles, and consists largely of three or four rounded eminences, rising to altitudes of less than 1000 feet. The principal headland on the E coast is Ru-Ushinish, projecting from the skirt of Mount Hecla. Loch Skiport, Loch Eynort, and five or six smaller sea-lochs in the E form practicable natural harbours; and Loch Boisdale is one of the safest and most capacious harbours in the Hebrides, and offers a favourite retreat to storm-tossed passing vessels. The western district, all southward from Loch Gamoslechan, is low, flat, and sandy; has, near the middle of its coast, the headland of Ru-Ardvula; is skirted along its shore with a fine white sand consisting chiefly of pulverised sea-shells; and contains numerous fresh-water lakes. These, with a few to be found on the western side, are distinguished for either the quantity or the quality of their fish, and are generally shallow and impregnated with peat, and appear to be the mere repositories of a general drainage which has few outlets to the sea. With inconsiderable exceptions, perennial streams are unknown. The universal prevalence of hard gneiss rock, passing in some places into coarse granite, presents neither subterranean receptacles for water nor fissures to transmit it, and occasions throughout the island an almost total absence of springs. The climate, however, for an Hebridean one, is far from being moist, and the air is generally mild and pure.

The only cave is at Corodale, on the E coast, between Loch Skiport and Loch Eynort. It gave refuge for some days in 1746 to Prince Charles Edward, and is called the Prince's cave. The soil on the uplands is so barren as mostly to afford but poor pasturage; on the tracts between the uplands and the lakes is partly black loam and partly moss; on the western seaboard, from end to end of that tract, over a breadth varying between ½ mile and 1 mile, is all sand; on the most productive arable grounds is an artificial mixture of sand, black earth, and manure. The uplands, are devoted chiefly to the rearing of black cattle, to the improvement of which by the introduction of new breeds, great attention has for some time been paid. The middle tract or belt of low country along the W base of the uplands is partly firm ground, naturally drained by runnels into the lake, and under cultivation, and partly black peaty moss undergoing gradual amelioration from diffusion on it of drift calcareous sand. The low sandy belt along the W shore is all arable, and produces, with aid of ordinary manures, good crops of oats, barley, and potatoes. Agriculture as a rule is conducted on thriftless principles. Some little advantage has been gained by the introduction of the Cheviot sheep. The inhabitants have shared largely in the distress in the Highlands from poor harvests and over population, and the district figured in the Crofters' agitation of 1883-84. South Uist has regular steamer communication with Glasgow and with Loch Maddy, and has a post and telegraph office under Lochmaddy at Howmore.

The parish comprehends the inhabited islands of South Uist, Benbecula, Eriska, Fladda, Grimisay, and Wiay, and some uninhabited islets. Its greatest length, from N to S, is 38 miles; its greatest breadth is 8 miles; and its area is 90,099 acres. About 19,700 acres are arable, and the rest of the land is variously mountain, hill, moor, and moss. This parish is in the presbytery of Uist and synod of Glenelg; the living is worth £278. The parochial church stands near the centre of the parish, was built in 1833, and contains 439 sittings. An Established mission church is at Boisdale, built in 1836, with 230 sittings; and another in Benbecula, built in 1824, with about 270 sittings. There is a Free church within the parish. One Roman Catholic chapel is at Ardkenneth, was built in 1829, and contains 400 sittings; another, in Benbecula, was built in 1881, and contains also 400 sittings; a third is in Eriska, was built in 1852, and contains 300 sittings. There are 8 public schools, with total accommodation for 977 children, an average attendance of 581, and grants amounting to £563, 0s. 8d. Valuation of parish (1860) £5678, (1884) £6740. Pop. of island (1841) 5093, (1861) 3406, (1871) 3669, (1881) 3825; of parish (1801) 4597, (1831) 6890, (1861) 5358, (1871) 5749, (1881) 6078, of whom 5842 were Gaelic-speaking.

Ulbster, a post office in Wick parish, Caithness, 7½ miles SSW of Wick town.

Ullapool, a village and a *quoad sacra* parish in Lochbroom parish, NW Ross and Cromarty. Backed to the E by a hill 900 feet high, the village stands on the NE shore of salt-water Loch Broom, 50 miles by water ESE of Stornoway, and 32 by road NW of Garve station on the Dingwall and Skye railway, this being 11¾ miles W by N of Dingwall. With Stornoway it communicates by steamer, and with Garve and Dingwall by coach. It was founded in 1788 by the British Fishery Society, and was intended to be a beautiful and spacious town on a regular plan. But, in consequence of the great declension which took place in the herring fisheries, its progress was arrested until, having passed from the proprietorship of the Fishery Society to that of the late Sir James Matheson, Bart., of Lewis, it underwent great improvement alike in its physical condition and in its appliances for traffic and communications. It exhibits, over the face of its terraced promontory, several lines of houses, most of them whitewashed, and either slated or tiled. In the foreground are a neat harbour and a breakwater—the harbour safe, spacious, and well kept. The principal buildings, both public and private, are all arranged along the beach facing the loch, and extending from end to end of the village. Three streets of houses behind, parallel, spacious, and provided with garden-plots, were lined off for the poorer fishermen, but have never been finished. Still the village is well suited to be a noble watering-place, its beach being capital bathing ground, its climate pleasant and salubrious, and its mountain scenery highly picturesque. There are a post office, with money order, savings' bank, and telegraph departments, a branch of the National Bank, a good hotel, an Established church (1829; 600 sittings), a Free church, dating from Disruption times, and a large public school (1877). The *quoad sacra* parish, constituted by the General Assembly in 1833, and reconstituted by the Court of Teinds in 1859, is in the presbytery of Lochcarron and the synod of Glenelg. The minister's stipend in £150. Pop. of village (1836) 730, (1861) 908, (1871) 752, (1881) 897; of *q. s.* parish (1871) 2624, (1881) 2573, of whom 2240 were Gaelic-speaking.—*Ord. Sur.*, sh. 101, 1882.

Ulston. See Jedburgh.

Ulva, one of the Argyllshire Hebrides, in Kilninian and Kilmore parish, on the W coast of Mull, lying between Loch Tuadh and the entrance of Loch-na-Keal, 10½ miles WSW of Aros, under which there is a post office of Ulva Ferry. Of eight houses here, all but the grocer's were destroyed by fire in June 1880. The island is separated on the W from Gometra by so narrow

a strait that, except as seen on its very shores, they appear to be one island; on the N and NE, from Mornish in Mull by Loch Tuadh, which decreases eastward from a breadth of 1¾ mile to a shallow and very narrow strait; on the SW, from Torosay in Mull by Loch-na-Keal, 1½ mile broad; and on the S from Little Colonsay by a sound 1 mile broad. Its length, from E to W, is 5 miles; and its maximum breadth is 2½ miles. The island is distinguished for grand basaltic colonnades and picturesque combinations of these with amorphous masses of trap. Its surface rises from the shore in successive ranges of terraces to an extreme altitude of 1400 feet. Its rocks are a dark bluish trap, now columnar, and now amorphous; and an amygdaloid, abounding in analcime and mesotype, now above the trap, now below it, and now interposed between two ranges of its columns. Some low but well-formed colonnades occur along the shores. The upper ranges seldom exceed 20 feet in height, but are very numerous; and they preserve little or no continuity, but exist in detached parts which in numerous places resemble fragments of walls and ruined towers. 'The ranges,' says Dr Macculloch, 'are often as regular as those of Staffa, although on a much less scale; and pass gradually from that regularity of form into the most shapeless masses. In many places they afford elegant and picturesque compositions, which, although passed every day by the crowds who visit Staffa, appear to have been unnoticed. If either their numbers, extent, or picturesque appearance be considered, they are more deserving of admiration than even those of the Giant's Causeway; and had they been the only basaltic columns on this coast, they might have acquired the fame which they merit. But Ulva is eclipsed by the superior lustre of Staffa; and, while the mass of mankind is content to follow the individual who first led the way, its beauties will probably be still consigned to neglect.' From 1473 and earlier the island was possessed by the Macquarries, whose last and sixteenth chief was visited here by Dr Johnson in 1773. Near his old mansion stands Ulva House, a large modern building, the seat of Francis William Clark, Esq., who owns 8000 acres in Argyllshire, valued at £1525 per annum. The *quoad sacra* parish of Ulva was disjoined, as a parliamentary church district, from the Mull parish of Kilninian and Kilmore in 1828, and was made a parochial erection by the General Assembly in 1833. Comprehending the islands of Ulva, Gometra, Colonsay, and Staffa, with a portion of the mainland of Mull, it is in the presbytery of Mull and the synod of Argyll. The minister's stipend is £153. The church, built in 1827, contains 320 sittings. Pop. of *q. s.* parish (1871) 222, (1881) 166; of island (1837) 168, (1851) 204, (1871) 71, (1881) 53.

Unapool. See Kylesku.

Underwood, a commodious mansion of about 1792, in Craigie parish, Ayrshire, 3 miles WNW of Tarbolton.

Union Bridge. See Hutton.

Union Canal, a canal in Edinburgh, Linlithgow, and Stirling shires, going 31½ miles westward from Port-Hopetoun, in the W of the city of Edinburgh, to a junction with the Forth and Clyde Canal at Port-Downie, 1½ mile W by S of Falkirk. Authorised in 1817, and begun to be cut in 1818, it was completed in the early part of 1822, the estimated cost being £235,167, but the actual cost nearly £400,000 up to the time of opening, and £600,000 within four years of that date. It was designed entirely for inland traffic, principally between Edinburgh and Glasgow, and for a long time was often called the Edinburgh and Glasgow Canal. It runs a total distance of only 25 miles measured in a direct line; and it expends the additional 6½ miles of its actual length mainly in sinuosities, designed to maintain the dead level, and to avoid the cost and delays of lockage. It traverses the parishes of St Cuthberts, Colinton, Currie, Ratho, Kirkliston, Uphall, Dalmeny, Abercorn, Linlithgow, Muiravonside, Polmont, and Falkirk; and is flanked, over most of its course, by productive and populous country. It proceeds on a level for 30 miles from Port-Hopetoun; descends 110 feet by 11 locks in the last 1½ mile to Port-Downie; and is 40 feet wide at the water-surface, 20 wide at the bottom, and 5 deep throughout. An aqueduct 65 feet high and 500 long takes it across the Water of Leith; a still grander aqueduct, with 23 arches, takes it across the river Avon; a tunnel 700 yards long takes it through a hill in the neighbourhood of Falkirk; and important cuttings, embankments, and works of masonry occur in many other parts of its course. The traffic on it, from the very commencement, proved uncompensating; was estimated, in the project for its formation, to yield a gross return of £55,000 a-year; yielded a natural return, during the first seven years, of less than £17,000 a-year; suffered vast decrease from the opening of the Edinburgh and Glasgow railway; and, a short time afterwards, lost all its passenger department, and diminished greatly in its mercantile and mineral departments. The canal was sold in 1848 to the Edinburgh and Glasgow railway company, and passed, in 1865, along with the Edinburgh and Glasgow railway, to the North British railway company.

Unst (anc. *Ónyst*, *Ónist*, and *Órnist*=*örnen-nyst*, 'eagle's nest'), an island in the extreme N of Shetland, 4½ furlongs E of the nearest point of Yell, 2¾ miles N of Fetlar, and 37½ N by E of Lerwick, under which there is a post and telegraph office of Uyea Sound. Its utmost length, from N by E to S by W, is 12⅜ miles; its breadth, from E to W, varies between 2¾ and 5¼ miles; and its land area, inclusive of Uyea, Haafgrunie, Balta, and some smaller islets, is 46⅜ square miles, or 29,856 acres. The coast, over much the larger part of its extent, is a constant alternation of headlands, and of indenting bays and creeks. The headlands, especially in the W and N, are precipitous, rocky, and high—the loftiest attaining a height of over 400 feet. The bays, on the contrary, are, for the most part, fringed with low, shelving, and sandy shores. The chief are Burra Firth on the N, Nor Wick, Harolds Wick, Balta Sound, and Sand Wick on the E, Uyea Sound on the S, and Lunda Wick on the W: but though most may often protect a vessel for a tide or two, none of them are safe harbours. Burra Firth and Nor Wick have a picturesque aspect, and are environed with much good land. Balta Sound on the E, and Uyea Sound on the S, are so covered by isles of their own name, and screened by projecting headlands at their entrances, as to afford good shelter to shipping. The tides on the coast flow nearly southward, and ebb northward, but are often flung from their direction, and whirled into eddies, by the projections and recesses of the coast; they run at spring, with a velocity of 6 miles an hour; and off Lamba Ness, the NE extremity of the island, they form a tumbling and spouting sea, inferior in its dangers only to that of Sumburgh Roost, and so impetuous and heaving, even in calm weather, as to prove dangerous to fishermen. Of numerous caves upon the coasts, one at Sha displays a roof supported by natural octagonal pillars; several in Burra Firth have the sea for their pavement, and run backward under the hills; one at the hill of Saxa-Vord, 300 feet long and of considerable height, is entered by a grand natural arch; and one a little E of the last resembles it in character, but is inferior to it in magnificence.

The surface of Unst, compared with that of the other Shetland Islands, is reckoned level; yet it has several extensive and moderately high hills. Valla Field, extending from the N end of the island to within 1½ mile of its S end, and attaining a maximum altitude of 703 feet, runs along the western coast, presenting a powerful rampart against the tremendous onsets of the Atlantic, yet often washed over its summit and down to the skirts of its interior declivities by clouds of foam and spray. Saxa-Vord, 934 feet high, and the loftiest ground on the island, rises boldly up from the sea, in the centre of the N coast, and forms a landmark to mariners within a range of 14 leagues. Crossfield, at right angles with Valla Field, but rising apart from it, extends nearly across the middle of the island, and terminates on the E coast in two conical peaks. Vordhill extends 3½

miles along the E coast S of Crossfield. Several other heights occur, but are inconsiderable in magnitude. The loftier hills are covered, to the depth of some feet, by such moss as forms good fuel; and the lower heights, once similarly covered, but now denuded of their moss, frequently show the bare rock, yet largely possess a green dry sward which yields excellent pasturage. A valley, immediately E of Valla Field, extends the whole length of the island, and has, from end to end, a chain of fresh-water lakes—the largest of which, the Loch of Cliff, is 2⅝ miles long, and of pleasant appearance. Much of the soil of the island is excellent, and, in spite of bad husbandry, produces good crops. About 2000 acres are arable, and nearly an equal number of acres are excellent meadow and grass-lands, which might easily be brought into tillage. Five-sixths of the whole area are in commonage; and might, to a considerable extent, be improved. Gneiss, serpentine, chlorite, slate, and diallage are the principal rocks of the island; and talcose and micaceous schists, primitive limestone, quartz, and hornblende also occur. Amianthus, asbestos, hydrate of magnesia, and chromate of iron, are the most noticeable minerals. The last occurs in considerable quantity, and is an object of much commercial value, on account of its yielding a fine yellow pigment, used in the dyeing of silk, wool, linen, and cotton. Limestone is quarried and burnt as a manure. Fishing here, as throughout Shetland, forms the prime employment of the inhabitants. Shetland hosiery forms the staple of manufacture. A chain of the Scandinavian towers, called brochs and Picts' houses, extends round the island; stone circles and barrows are numerous; and on one of the cones of Crossfield were held the great courts of Shetland, previous to their removal to the vale of Tingwall. Though Unst has, from time immemorial, formed only one charge, the island is naturally divided into three districts, which are known as the North, Middle, and South parishes. Ruins or vestiges exist of upwards of 20 pre-Reformation places of worship; and three of these were, during part of last century, occupied, in regular rotation, as parish churches, whilst six are still surrounded by graveyards. The Rev. James Ingram, D.D. (1776-1879), discharged parochial duty in Unst, first as Established and then as Free Church minister, from 1821 till within a few years of his death. Biot's and Kater's experiments at Buness have been noticed in our article on SHETLAND. Two proprietors hold each an annual value of more than £500 (one owning nearly one-half of the entire island), and 4 of between £100 and £500. The parish of Unst, comprising the island of Unst and the above-named islands, is in the presbytery of Burravoe and the synod of Shetland; the living is worth £309. The church, near the head of Balta Sound, is a neat edifice, built in 1827 at a cost of £2000, and containing 1224 sittings. There are also two Free churches and a Wesleyan Methodist chapel; and five public schools—Balta Sound, Burra Firth, Harolds Wick, Uyea Sound, and Westing—with respective accommodation for 100, 50, 102, 70, and 73 children, had (1884) an average attendance of 55, 33, 28, 27, and 23, and grants of £62, 5s. 6d., £41, 2s., £35, 6s., £35, 7s., and £30, 9s. 4d. Valuation of parish (1860) £2677, (1884) £4173, 4s. 6d. Pop. of parish (1801) 2259, (1831) 2909, (1861) 3060, (1871) 2780, (1881) 2181, of whom 2173 were in Unst island.

Uphall, a village and a parish of S Linlithgowshire. The village stands on the left bank of the Brox Burn, 1½ mile W by S of the town of Broxburn, and 7 furlongs N by W of Uphall station on the North British railway, this being 13⅝ miles WSW of Edinburgh, and 5¾ E by N of Bathgate. It has a post office, with money order, savings' bank, and railway telegraph departments, a public hall, and an inn, once a well-known coaching stage. Pop. (1871) 360, (1881) 591.

The parish, containing also the town of BROXBURN, originally was known as Strathbroke ('valley of the brock or badger'); and it took that name from the Burn of Brocks or Brocks' Burn, corrupted now into Brox Burn. It is bounded NE and E by Kirkliston, SE and S by Kirknewton and Midcalder in Edinburghshire, W by Livingston and Ecclesmachan (detached), and NW by Linlithgow and the main body of Ecclesmachan. Its utmost length, from ENE to WSW, is 4¼ miles; its utmost width is 3½ miles; and its area is 4561¼ acres, of which 20¼ are water. The ALMOND, near Amondell, flows ½ mile north-north-eastward along all the Kirknewton border; and Brox Burn, which joins it some way lower down, takes an east-north-easterly course of 4½ miles, partly along the boundaries with Ecclesmachan (detached) and Kirkliston, but mainly across the interior. The UNION CANAL, too, traverses the E of the parish for 2⅝ miles, here making a westerly bend round the town of Broxburn. The surface is gently undulating, and at no point sinks much below 200, or much exceeds 400, feet above sea-level. The higher grounds, however, command magnificent views of the Lothians, to North Berwick Law and the Lammermuirs. The rocks are carboniferous, belonging to the calciferous sandstone series, with intrusive patches of basalt. They include oleaginous shales, coal, many seams of valuable ironstone, excellent sandstone, limestone, marl, reddish coloured chalk, clay fit for the uses of the brickmaker and the potter, and some coarse fuller's earth. The manufacture of paraffin oil from the shales is a recent and important industry; and hither must be ascribed the rapid increase in the population. There are three extensive paraffin works in the parish—Broxburn; Uphall, recently amalgamated with Young's; and Holmes, lately established. The soil on the lower grounds is a fine black loam, and elsewhere is mainly a fertile clay. Fully seven-eighths of the entire area are in tillage; and much of the remainder is under coppice or plantation. Mansions, noticed separately, are AMONDELL, HOUSTOUN, KIRKHILL, and MIDDLETON HALL; and the Earl of Buchan owns more than half of the whole parish, 4 lesser proprietors holding each an annual value of £500 and upwards, 1 of between £100 and £500, and 2 of less than £100. Uphall is in the presbytery of Linlithgow and the synod of Lothian and Tweeddale; the living is worth £450. The parish church, containing 400 sittings, is partly of pre-Reformation date, and partly appears to have been built in the middle of the 17th century. The bell still in use is inscribed 'Campana Sancti Nicholai de Strathbroke, 1441;' and in the Buchan vault are buried the Hon. Harry Erskine (1746-1817) and his brother, Thomas, Lord Chancellor Erskine (1750-1823). Other places of worship are Broxburn Established chapel of ease (1884), Uphall or Broxburn Free church, Broxburn U.P. church (1880), and Broxburn Roman Catholic church of SS. John Cantius and Nicholas (1881). Broxburn public, Uphall public, and Broxburn R. C. schools, with respective accommodation for 348, 225, and 171 children, had (1884) an average attendance of 620, 168, and 136, and grants of £470, 13s., £116, 12s., and £61, 6s. 8d. Valuation (1860) £7878, (1885) £39,428, 15s. 2d., *plus* £3652 for railway. Pop. (1801) 786, (1831) 1254, (1861) 1507, (1871) 2772, (1881) 4812.—*Ord. Sur.*, sh. 32, 1757. See the Earl of Buchan's 'Account of the Parish of Uphall' in *Trans. Soc. Ants. Scotl.* (1796).

Uplawmoor or **Ouplaymoor**, a village in Neilston parish, Renfrewshire, at the foot of Loch Libo, 3¼ miles SW of Neilston town. It has a post office under Glasgow.

Upper Keith. See HUMBIE.

Upper Largo, etc. See LARGO, etc.

Upsetlington. See LADYKIRK.

Urchay. See ORCHY.

Urie, a mansion in Fetteresso parish, Kincardineshire, on the left bank of Cowie Water, 2 miles NNW of Stonehaven. It is an Elizabethan edifice of 1855; and the addition of a wing in 1883-84 at a cost of over £10,000 has made it the largest mansion in the county. The grounds are very extensive, including 700 acres within the walls in permanent pasture and 5 miles of

picturesque drives within the gates. On the principal approach there is a high-level bridge over the Cowie, which cost upwards of £2000. The first known possessors of the estate were the Frasers, a family of renown in early Scottish history, whose chief was designated Thane of Cowie. Through the marriage of Margaret Fraser with Sir William Keith, it passed to the Marischal family. The barony of Urie, which then included the lands of Elsick and Muchalls, was sold in 1413, along with other possessions, to William de Hay, Lord of Errol. It remained in the possession of the Hay family till 1640, when the estate of Urie was purchased by William, Earl Marischal, Elsick and Muchalls having in the interval passed into other hands. About 1647 it was sold to Col. David Barclay, third son of Barclay of Mathers, the representative of the ancient De Berkeleys. Col. Barclay, 'having religiously abdicated the world in 1666 and joined the Quakers,' at his death in 1686 was succeeded by his son, Robert Barclay (1648-90), the famous Quaker apologist. His great-grandson and namesake (1751-97) in 1777 married the heiress of Allardice (see ARBUTHNOTT), and improved the estate, granting feus, from which the New Town of Stonehaven has arisen. His son, Capt. Rt. Barclay-Allardice (1779-1854), was famous as an agriculturist, and still more for his pedestrian feats, having in 1809 walked 1000 miles in 1000 consecutive hours. At his death the estate was purchased by the late Alex. Baird, Esq., ironmaster at Gartsherrie, who was succeeded in 1862 by his brother, John Baird, the father of the present laird, Alex. Baird, Esq. (b. 1849; suc. 1870). With the adjacent estate of RICKARTON, purchased in 1875, the lands extend to about 10,000 acres, and yield a rental of about £7500. Other estates owned by Mr Baird are Drumkilbo in Perth and Forfar shires (1400 acres; rental £2000), and Inshes in Inverness-shire (2000; £3000).—*Ord. Sur.*, sh. 67, 1871. See W. R. Fraser's *History of Laurencekirk* (Edinb. 1880).

Urie, The. See URY.

Urigill, Loch, a troutful lake of Assynt parish, Sutherland, 1⅝ mile SW of Altnakealgach Inn. Lying 515 feet above sea-level, it extends 1¾ mile north-eastward, varies in breadth between 2¼ and 5½ furlongs, contains four islets, and sends off a stream 1⅝ mile north-north-westward to Cam Loch.—*Ord. Sur.*, sh. 101, 1882.

Urquhart (oldest known form *Urqwhard;* present form dating from the early part of 16th century; Gaelic form *Urchadain*, but the derivation is uncertain), a coast parish, containing a village of the same name, in the NE of the county of Elgin. It is bounded NNE by the Spey Bay portion of the Moray Firth; at the NE corner it is separated from Banffshire for 1¾ mile, partly by the present and partly by the former course of the river Spey; * and it is bounded SE by the parish of Speymouth, and SW by the parishes of St Andrews-Lhanbryd and Drainie. Except for 2⅞ miles at the NW corner, where the river Lossie forms the whole boundary, from Arthur's Bridge at Inchbroom to the sea, along the NNE side, and at the mouth of the Spey, the boundary line is almost entirely artificial. In shape the parish is triangular—one side lying along the coast from the mouth of the Lossie to the mouth of the Spey; another from the mouth of the Lossie in an irregular line south-eastward to the point on the extreme S where the parishes of Urquhart and St Andrews meet; and the shortest side from this point in an irregular line north-eastward to near the present mouth of the Spey. The first side measures 7½, the second 8½, and the third 5½ miles, all in straight lines; and the area is 13,660·765 acres, of which 70·988 are water, 501·810 foreshore, and 22·174 tidal water. The coast is low and sandy, and rising from the sand are a series of bent-covered hillocks and pebble beaches, the peculiar features of which have been already noticed under ELGINSHIRE. Part of these to the NW, extending over an area of from 2 to 3 square miles, and covered with heathy scrub, forms a flat tract very little above sea-level, and known as the Links of Innes. The rest of the surface is undulating, but nowhere reaches any great height, the highest point being the Bin Hill or Black Hill of Moray (223 feet), close to the sea-coast W of Garmouth. The small Loch of Cotts (400 × 200 yards) was at one time much larger, but has been reduced by drainage. In the NW the drainage is carried off to the Lossie by means of the Innes Canal, and elsewhere by small streamlets to the Spey or the sea. Much of the surface is well wooded, but more than half is under cultivation, though towards the NW there is a good deal waste. The soil is light and sandy, but kindly, and the climate is early and warm. The underlying rocks are Old Red Sandstone, but the beds are deeply covered by alluvial deposits, and mixed with the soil and clay there are in many parts large numbers of small fragments of rocks belonging to different beds of Jurassic age. There is a well-preserved though small stone circle on the farm of Viewfield, N of the village, and on the side of the road leading from it to the E gate of Innes House; and at many points cists and flint and stone implements of neolithic age have been found, as well as some fine gold armlets. A particularly large and interesting find of these was made in 1870 on the farm of Meft near the SW border. The place seemed to be an abandoned manufactory of flint implements. All the best of the specimens found are now in the Antiquarian Museum in Edinburgh, and an interesting account of some of them and of all the pre-historic antiquities of the parish will be found in a paper by the Rev. James Morrison in the *Proceedings of the Society of Antiquaries of Scotland* for 1871. It seems to have been in this parish that Malcolm IV. defeated the Mormaer of Moray and his followers in 1160, when the lands of Innes between Lossie and Spey were granted to Bereowald of Flanders, and large settlements of 'peaceful' Flemings introduced. Prior to this David I. had attempted to introduce civilisation among the Celtic natives of the district, by the foundation of a priory, which stood on low ground to the ENE of the village. No remains of the buildings have existed since 1654, when the material was carried off and used for the construction of a granary at Garmouth and the repair of the manse and churchyard wall. The site can still be traced. Founded in 1125, the priory was a cell of Dunfermline Abbey, the Benedictines who were its first inmates coming from Canterbury. It was united to Pluscarden by a bull of Pope Nicholas V. in 1453, and the buildings seem thereafter to have fallen into decay. In 1866 some oak beams and a curious bronze vessel were found on the site. The former are in the Elgin Museum, and the latter is at Duff House. The possessions of the priory were extensive, and included the lordship of Urquhart, Fochabers, lands in Durris, Auldearn, and Dalcross, and fishings on the Spey. The S and E parts of the parish were in 1591 erected into a temporal lordship in favour of Alexander Seton, Commendator of Pluscarden, Baron Urquhart, afterwards Earl of Dunfermline. They were purchased by the Duke of Gordon in 1730, and in 1777 passed by excambion to the Earl of Fife, who had acquired the estate of Innes in 1767. An old ruined church, dedicated to St Margaret, wife of Malcolm Ceannmor, which stood at the village, is said to have been pulled down and the materials used in the construction of the present Free and Established churches in 1844. The village of Urquhart, in the SW, 1¾ mile NE of Lhanbryd station, is a small place, occupied mostly by crofters and labourers. The parish, which contains also the villages of KINGSTON and GARMOUTH at the mouth of the Spey, is traversed for 1¾ mile on the S by the Forres and Keith section of the Highland railway, and for 4 miles near the centre by the Elgin and Buckie section of the Great North of Scotland railway, with stations at Urquhart village and Garmouth, the former 5 and the latter 8 miles E by N of Elgin; and there are a number of good district roads. The parish is in the presbytery of Elgin and the synod of Moray, and the living is worth £350 a year. The villages of

* Some authorities hold that the line ought to follow the present channel of the Spey entirely.

Garmouth and Kingston, though in the civil parish, are *quoad sacra* in the parish of Speymouth. The parish church, on high ground to the N of the village, is a good building, with a high square tower, erected in 1844 and reseated in 1878. There are Free churches at the village and at Garmouth. Under the school board, the Urquhart public school, with accommodation for 195 pupils, had in 1884 an attendance of 151, and a grant of £158, 5s. 2d. The school at Garmouth is under the Speymouth school board. The largest proprietor is the Earl of Fife, and the Duke of Richmond and Gordon holds an annual value of more than £1100, 2 other proprietors hold each between £500 and £100, 6 hold each between £100 and £50, and 10 hold each between £50 and £20. Mansions are INNES HOUSE and Leuchars House. Valuation (1860) £6970, (1883) £8052, 14s. Pop. (1801) 1023, (1831) 1019, (1861) 2532, (1871) 2368, (1881) 2139, of whom 1187 were in the ecclesiastical parish.—*Ord. Sur.*, sh. 95, 1876.

Urquhart and Glenmoriston, a large parish of Inverness-shire. It is bounded N by the parishes of Kilmorack, Kiltarlity, and Inverness, SE along the centre of Loch Ness by the parishes of Dores and Boleskine, S by Boleskine and Kilmonivaig, W by Ross-shire and the parish of Kilmorack, and NW by the parish of Kilmorack. The boundary is largely natural. From the NE corner, 2 miles NE of Temple Pier on Urquhart Bay on Loch Ness, the boundary line passes south-westward along the centre of Loch Ness to the mouth of the river Moriston, and, after following up the course of that river for 4¾ miles, it strikes up a small stream south and south-eastward to the watershed, first between the river Moriston and the river Oich, and then between Glen Moriston and Glen Garry. The chief heights here are Ceann a Mhaim (2203 feet), Meall Dubh (2581), Clach Crioche (2211), and Meall Leac Ulaidh (1760). From the latter hill the line follows the Riabhach Burn to Loch Loyne (760 feet), passes up the centre of Loch Loyne till near the upper end, and thence follows the county boundary across Loch Clunie (606), and on as far as Sgurr nan Conbhairean (3632). From this hill it strikes first northward and then E by N along the line of watershed between Glen Affric and Glen Moriston by Tigh More (3222 feet), Aonach Shasuinn (2901), Carn a Choire Bhuidhe (2778), Carn a Chaochain (2314), and Carn a Choire Leith (2118), from the last of which it strikes down across the centre of Loch na Beinne Baine, up a small burn entering it on the E side, and thence round the high ground E of Loch nan Eun to the Allt nam Faogach near Loch nam Faogach, follows this stream downwards for 1¼ mile, and then strikes northward to the burn that rises between Carn Bingally (1273) and Meal a' Choire (1000). It follows this burn downward to its junction with the Enrick near Corriemony, and then the Enrick for a short distance to a point 1 mile W of Loch Meiklie (372 feet), where it again turns off first to the N up to the watershed between the basin of the river Beauly and that of Loch Ness, and then along this watershed by Meall nan Caorich (1401) and Meall Gorm (1355), whence it winds first N, then S, and finally E back to the starting point on Loch Ness. The greatest length of the parish, from this point south-westward to Sgurr nan Conbhairean, is a little over 28 miles; the average breadth at right angles to this is about 8 miles; and the area is 129,204·673 acres, of which 6500·092 are water. The whole parish may be said to consist of the two glens, Glen Urquhart and Glen Moriston, of which the latter is separately noticed. From the SE border along Loch Ness the ground rises steeply, and attains its greatest height at the well-known Meall Fuar-mhonaidh (Meal Fuarvounie; 2284 feet) midway between Glen Urquhart and Glen Moriston, with Glasbheinn Mhor (2000), Carn na Fiacail (1913), Carn Tarsuinn (2000), and Meall na Criche (2224) stretching away to the W from it. The heights on the outside of the glens have been already given in describing the boundary line. Scattered all over the parish, especially N of the middle and lower parts of Glen Moriston, are a large number of lakes and lochans, of which the chief, besides those already mentioned, are Loch nam Deirisdean (1750 feet; 3×1 furl.), Loch na Ruighe Duibhe (1600) about twice the size, and Loch nam Meur (1580), also about twice the size, all on the Allt Seanabhaile, a tributary of the Enrick; another Loch nam Meur (1573; 4×3 furl.) and Loch Aslaich (1360; 3×1 furl.), both on the upper waters of the Coiltie; Loch nam Breac Dearga (1500; 5×1½ furl.) W of Meall Fuar-mhonaidh, and a large chain of lakes to the W, all draining to the Allt Sigh flowing to Loch Ness; and Loch na Criche (1667; 1⅛×¼ mile), Loch an Staca (1604; 8×3 furl.), and Loch Liath (1500; 3×2 furl.), all on two tributaries of the river Moriston. The drainage is carried off by the Enrick, the Coiltie, and the Moriston, with their tributaries, as well as by a number of smaller burns flowing direct to Loch Ness. There is good fishing in almost all the streams and lakes. The heights are rocky and bold, and some of the scenery is remarkably pretty and picturesque. The falls of DIVACH on a tributary of the Coiltie are well known. The bank of Loch Ness, Glen Urquhart, with the lesser hollow of the Coiltie, and Glen Moriston are all well-wooded, but the rest of the parish is rock and bleak moor. The arable land is confined to some narrow slopes along Loch Ness and the two glens. The soil along Glen Urquhart is a good loam, which, though somewhat stony and not very deep, is fertile; that in Glen Moriston is much lighter and sandier, and not very productive, being mostly given up to pasture. The underlying rocks are metamorphosed Lower Silurian beds of mica schist, gneiss, crystalline limestones, and serpentine, except along the shore of Loch Ness from the NE corner of the parish to beyond Meal Fuar-mhonaidh, where a patch of Old Red Conglomerate comes in. In the lower part of Glen Urquhart a large number of minerals are to be found. (See INVERNESS-SHIRE.) To what has been said of Glen Moriston in the separate notice it remains here but to add that it afforded shelter to Prince Charles Edward Stewart on 23 and 24 July 1746, and again on 11 and 12 August. On 24 July he was joined in the cave in which he was concealed by six faithful men of Glen Moriston, who continued with him as guides and guards till the 19th of the following month, when they were dismissed at Loch Arkaig a few days before the Prince set out for Badenoch to meet Lochiel. Glen Urquhart spreads out round Urquhart Bay in a fine semicircular flat well-wooded and cultivated, and both above and below Drumnadrochit—1 mile up the river Enrick from the Bay—but especially above, is a considerable amount of excellent haughland. Above this is a narrow rocky glen, beyond which there is good soil round Loch Meiklie, and again farther up the Glen at Corriemony. The whole length of the Glen, from Urquhart Bay to Corriemony, is 9 miles. In the moorland districts there is excellent shooting, and of the whole area over 90,000 acres are set apart as deer forests, the chief being Balmacaan S of the upper part of Glen Urquhart, Ceannacroc at the head of Glen Moriston on the N side, Invermoriston at the mouth of the Glen on the N side, and Portclair at the mouth of Glen Moriston on the S side. The principal prehistoric antiquities are cairns, stone circles, and cup-marked stones and rocks. Culdee times are marked by a number of old burying-grounds associated with the names of various saints, while near Temple Pier on the N side of Urquhart Bay was a small religious house belonging to the Knights Templars. The principal object of antiquarian interest now, however, is Urquhart Castle on the point called Strone on the S side of Urquhart Bay. The ruins of the castle occupy a boss of sandstone rock measuring about 600 feet from N to S, and 200 feet from E to W, the irregular rectangular form of which is followed by the walls. This is separated from the rising ground behind by a moat some 16 feet wide and 30 feet deep, but probably at one time much deeper. Whether this was ever filled with water is doubtful, as it is a considerable distance above the level of Loch Ness, and there is no appearance of any spring

or stream that could have supplied the water. It was, however, spanned by a drawbridge leading to the principal entrance, consisting of an archway for a portcullis flanked by projecting towers. Within this is the guardroom, and beyond is the courtyard. The oldest portion of the castle seems to be to the N and E, and at the extreme N end is the most prominent part of the whole—the great keep 50 feet high, and 34 by 29 feet on the outside, with walls 8 feet thick. It consisted of basement vaulted chambers, three stories which seem to have had wooden joists, and a fourth top story which seems to have been vaulted. In the wall is a wheel staircase, and at each corner of the building was a square turret. This portion of the structure seems to date from the middle of the 13th century. There is traditional account, no doubt true, of a much earlier stronghold, but there must certainly have been here one of the strengths of Gillespie Macscoulane, who was defeated and put to death during a rebellion in the north in 1229, after which the lands of Urquhart and Boleskine, which had been claimed by him, were granted to Sir Thomas Dorward, who was succeeded by his son, Sir Allan Hostiarius. Shortly after the death of the latter, whose heirs were three daughters, the castle passed into the possession of the Cumins of Badenoch, who seem to have held it till the beginning of the great War of Independence, when a detachment of Edward's army occupied it, Sir John Fitzwarrenne being appointed governor. During the first struggle against English usurpation, under Sir William Wallace, it was besieged and captured by Sir Andrew Moray, younger of Petty, and remained in the hands of the national party till 1304, when it again passed into possession of the English after a long siege, in which the additions to the fortifications ordered by Edward in 1297 were the chief means of its prolonged resistance. These additions probably included the flanking towers at the gateway and the bastioned curtain walls. The castle was one of the few Scottish strengths that successfully resisted Edward Baliol's party after the death of Robert Bruce. In 1336 we find it in charge of Richard Cumin, but it was a royal castle, and as such was granted in 1359 to William, Earl of Sutherland, and again in 1371 to David, Earl of Strathearn, son of Robert II., whom failing, to Alexander, Wolf of Badenoch. The castle was, however, in 1398, placed by parliament under charge of a governor appointed by them, and in the Chamberlains Rolls for 1428-29 are records of sums expended on repairs, and from entries in 1448-50 we learn that the fabric and garrison seem to have been under the charge of the Thane of Cawdor. It was seized by the Earl of Ross during the rebellion of 1451 ; but notwithstanding an Act of Parliament of date 1455, annexing the castle and barony 'to the Crowne perpetually to remane, the quhilk may not be giffyn away,' it was again granted by the king to the Earl of Ross, on whose forfeiture it once more returned to the crown. In 1475 it was granted to Hugh Rose of Kilravock, but towards the close of the century it was given to the Grants who had distinguished themselves on the royal side against Donald Dubh, Lord of the Isles. This clan had to fight for their hold, but they prevailed, and in 1509 a charter in favour of Grant of Freuchie was signed by the king, and in the possession of the Seafield Grants the barony and castle still remain. The destruction of the roof and woodwork seems to have taken place early in the 18th century. One vault is said to contain the plague which was somehow buried there, and another a concealed treasure. See a long article in the *Builder* for 17 Feb. 1872.

The parish is traversed by a good road along the shore of Loch Ness ; by another up Glen Urquhart and across to Strath Glass, which is reached at Glenaffric Hotel at the mouth of the river Cannich ; and by another up Glen Moriston, which continues by Glen Clunie to Invershiel and Kintail at the head of Loch Duich. The villages are Lewiston at the Established church and Millton farther NW at the Free church. The parish is made up of the old parishes of Urquhart and Glenmoriston, which were united at or shortly after the Reformation. The latter was formerly joined to Abertarff. Urquhart and Glenmoriston is in the presbytery of Abertarff and synod of Glenelg, and the living is worth £377 a year. The parish church is near the mouth of Glen Urquhart, about a mile from Urquhart Bay. It was built in 1836 in place of a previous church of 1630, and contains 850 sittings; and there is a mission station at Glen Moriston. There are Free churches at Glen Urquhart and at Glen Moriston, and there is also an Episcopal mission station (St Ninians). Under the school board are Balnain, Bunloit, Dalchreichard, and Glen Urquhart schools and joint schools at Corriemony and Invermoriston, which, with accommodation for 97, 60, 63, 233, 60, and 55 pupils respectively, had in 1884 attendances of 41, 27, 30, 111, 15, and 25, and grants of £29, 6s. 8d., £12, 15s. 4d., £42, 5s., £82, 11s. 10d., £20, 2s., and £36, 6s. 6d. The chief proprietors are the Dowager-Countess of Seafield, the trustees of Grant of Invermoriston, Ogilvie of Corriemony, and Grant of Lakefield; and there are a few smaller landowners. The mansions are Balmacaan, Corriemony, Invermoriston House, Lakefield House, and Lochletter House. Valuation (1860) £8084, (1884) £13,802. Pop. (1801) 2633, (1831) 2942, (1861) 2911, (1871) 2780, (1881) 2438.—*Ord. Sur.*, shs. 73, 72, 83, 1878-81.

Urquhart and Logie Wester, a parish partly in Ross-shire, but comprehending also in its centre the whole of the detached section of Nairnshire forming the barony of Ferintosh. It is bounded for ½ mile at the N corner by Cromartyshire ; NE by the parish of Resolis, and for ⅝ mile by Cromartyshire again ; SE by the parishes of Avoch, Kilmuir Wester, Killearnan (detached), Kilmuir Wester, and Killearnan ; SW and W by the parish of Urray ; and NW by the parish of Fodderty and the Cromarty Firth. All along the NW side the boundary follows the course of the river Conan and the Cromarty Firth, but elsewhere it is almost entirely artificial. The extreme length, from NE to SW, parallel to the Cromarty Firth, is a little over 8¾ miles ; the average breadth at right angles is about 2½ miles ; and the total area is 14,999·722 acres, of which 125·429 are water and 1293·511 foreshore. The Ross-shire portion contains 8613·977 acres, of which 49·279 are water and 986·738 foreshore, and the rest forms the detached portion of Nairnshire. The surface rises pretty regularly from the Conan and the Cromarty Firth south-eastward to the boundary line, which runs partly along Ardmeanach or the Mullbuie ridge of the Black Isle, along which it reaches a height of 627 feet. The higher grounds command magnificent views of the upper reaches of the Cromarty Firth. The slope is cut across by ravines formed by a number of small burns, which carry off the drainage to the river Conan or direct to the Cromarty Firth. The soil of the lower grounds is good but light loam, but in the higher portions it is poorer, though all districts produce excellent crops of barley and oats. Along the coast there are large farms, but the higher ground is given up to small holdings and crofts, the tenants of these having within the last fifty years reclaimed and improved a large extent of land formerly waste. There is still some moorland, but more than half the area is under the plough, and the great proportion of the rest pasture, there being very little under wood. The underlying rocks are Old Red Sandstone. The Nairnshire portion, which constitutes the barony of Ferintosh, belonging to the family of Forbes of Culloden, and Kinkell Castle have both been separately noticed. The parish is traversed along the centre and NW by main roads from Cromarty to Dingwall, with a branch running up the valley of the Conan. The extreme W corner is crossed for 2¾ miles by the Inverness and Dingwall section of the Highland Railway, on which is Conan station, 16½ miles NW of Inverness and 2 S of Dingwall. The only village is Conan Bridge, but there are hamlets at Culbockie, Duncanston, and Newton of Ferintosh. The mansions are Conan Honse and Ryefield. This parish, formed by the union of the parishes of Urquhart (NE) and Logie-Wester (SW) as early as

1490, is in the presbytery of Dingwall and synod of Ross, and the living is worth £446 a year. The parish church, near the centre, on the coast side, was built in 1795, and contains over 1000 sittings; and there is also a Free church. Under the school board Conan, Culbockie, Ferintosh, and Mullbuie schools, with accommodation for 110, 134, 155, and 95 pupils respectively, had in 1884 attendances of 62, 56, 53, and 78, and grants of £40, 7s. 7d., £34, 7s. 6d., £62, 0s. 8d., and £48, 8s. 8d. The principal proprietors are D. Forbes, Esq. of Culloden, Sir K. S. Mackenzie, Bart. of Gairloch, and Sir J. D. Mackenzie of Findon; 1 other holds an annual value of between £500 and £100, and 3 hold each between £50 and £20. Valuation (1860) £7245, (1885) £10,566, 8s. 6d., *plus* £813 for the railway. Pop. (1801) 2820, (1831) 2864, (1861) 3147, (1871) 2863, (1881) 2525, of whom 1133 were males, while 1639 were in the Ross-shire section.—*Ord. Sur.*, shs. 83, 93, 1881.

Urr, a Kirkcudbrightshire parish, towards the S containing the town and station of Dalbeattie, 14½ miles SW of Dumfries and 5¼ ESE of Castle-Douglas. It is bounded NE by Kirkpatrick-Irongray and Lochrutton, E by Kirkgunzeon, SE by Colvend, SW by Buittle and Crossmichael, and NW by Kirkpatrick-Durham. Its utmost length, from N by W to S by E, is 12⅜ miles; its breadth varies between 4½ furlongs and 3 miles; and its area is 24⅝ square miles or 15,750½ acres, of which 41¼ are foreshore and 263½ water. Urr Water winds 10⅜ miles south-south-eastward along all the Crossmichael and Buittle boundary, though the point where it first touches and that where it quits the parish are only 7½ miles distant as the crow flies. Kirkgunzeon Lane or Dalbeattie Burn, after flowing 2¼ miles southward along the Kirkgunzeon border, winds 2 miles westward and south-south-westward across the interior, till it falls into the Urr at a point ¾ mile SSW of Dalbeattie. Three lakes are Edingham Loch (1¼ × ¼ furl.), 1½ mile N by E of Dalbeattie; Milton Loch (6 × 3¾ furl.; 420 feet), in the northern interior; and Achenreoch Loch (9 × 1¾ furl.; 340 feet), on the Kirkpatrick-Durham boundary. In the S the surface declines to less than 50 feet above the sea, and thence it rises northward to 408 feet at Little Firth-head, 500 at Barr Hill, 668 near Meikle Auchenreoch, and 900 at Larganlee Hill, so that Urr, compared with other Kirkcudbrightshire parishes, is pretty low and level. Granite, in places protruding at the surface, is the predominant rock; and limestone occurs, but is very hard, and little suited for economical purposes. Coal is supposed to exist in the hills to the N, but only in small quantity; iron ore is plentiful, but cannot be worked for want of cheap fuel; and shell-marl abounds, but has long ceased to be used as a manure. The soil, except on some mossy land in the S, and in some moorish land in the N, and at the protrusions of granite, is generally light and fertile. The proportion of arable land to that which cannot be ploughed is 12 to 1; and about 800 acres are under wood. A remarkable artificial mound, the Moat of Urr, stands on the right bank of Urr Water, 2⅝ miles NNW of Dalbeattie. It rises in successive concentric terraces, with a diameter and a height unexcelled by those of any other ancient moat in Scotland; was formerly surrounded by outworks of different construction from its own, and by Dr Skene is regarded as marking the sight of Carbantorigum, a town of the Selgovæ mentioned by Ptolemy. A standing-stone, consisting of a rude block of granite, is in a field 1 mile to the E of the moat; and bronze vessels and Roman coins have been found at various times and in different places. Pre-Reformation chapels were in several places, and one of them has left to its site the name of Chapelton. In the extreme N is a tombstone over the grave of four Covenanters; and the fanatical sect of Buchanites, after their flight from Ayrshire, resided for a time at Auchengibbert, from whence they removed to Crocketford. Spottes, noticed separately, is the chief mansion, and 10 proprietors hold each an annual value of more than £500. Giving off the *quoad sacra* parish of Dalbeattie, Urr is in the presbytery and synod of Dumfries; the living is worth £395. The parish church, near Haugh of Urr, and 3⅜ miles NNW of Dalbeattie, was built in 1815, and contains 815 sittings. Besides those noticed under Dalbeattie, three public schools—Hardgate, Milton, and Springholm—with respective accommodation for 162, 72, and 70 children, had (1884) an average attendance of 89, 30, and 42, and grants of £34, 12s., £28, 6s., and £71, 10s. 6d. Valuation (1860) £14,674, (1885) £28,162, 5s. Pop. (1801) 1719, (1831) 3098, (1861) 3585, (1871) 4606, (1881) 5490, of whom 1350 were in Urr ecclesiastical parish.—*Ord. Sur.*, shs. 5, 9, 1857-63.

Urrard House, a mansion in Moulin parish, Perthshire, near the left bank of the Garry, 2½ miles SE of Blair Athole.

Urray, a parish, containing a hamlet of the same name, lying mostly in Ross-shire, but with a small portion also in Inverness-shire. It consists of a main portion along the lower reaches of the Conan and its tributary the Orrin, and a detached section about 18 miles farther up Strath Conan. The main portion, which is bounded N by the parish of Contin, NE by the parish of Urquhart and Logie-Wester, E by the parish of Killearnan, S and SW by the parish of Kilmorack, and W by Contin, measures 7 miles from N to S, and the breadth at the N end is 6 miles and at the S end 3 miles. The detached section, which consists of 'a davoch of land,' is entirely surrounded by the parish of Contin. The total area of the parish is 74,172·794 acres, of which 1396·259 are water, 84·4 are foreshore, and 52·92 are tidal water. Of this total there are in Inverness-shire 382·530 acres, of which 25·297 are foreshore and 7·720 tidal water, while all the rest is in Ross-shire. The area of the detached portion is 40,126·803 acres. The portion of the surface to the E is low, and over the rest of the main part it is undulating, and the straths of the Conan, Orrin, and Beauly are well wooded, and in some places well cultivated, and the views along the first and last are in many places very picturesque. The detached section is very hilly. The soil in some parts of the straths is a good carse clay, and elsewhere stony sand, passing to gravel; but on the lower slopes it is warm and dry, and under good management produces fair crops. The underlying rocks are chiefly metamorphosed Lower Silurian beds, but on the E they are Old Red Sandstone. The drainage is carried off on the N by the Conan, which forms part of the northern boundary; in the centre by the Orrin; and in the S by the Beauly, which forms part of the southern boundary; and by smaller burns flowing to these rivers. A tract of good land at the junction of the Orrin and the Conan was greatly improved by drainage operations carried out in 1869. A reach of the Highland railway passes through the E side of the parish for 2 miles northward from Muir of Ord station; and access to the eastern part of the parish may be had from that point, or from Conan station in the parish of Urquhart. The great road from Inverness by Dingwall to the N runs alongside the railway; good roads branch off it up all the straths; and there are also a number of good cross and district roads. Besides farming and sheep-farming, the only industries are the salmon-fishing in the Conan and a distillery at Ord. The mansions are Brahan Castle, Highfield House, Muirton House, Ord House, and Tarradale House—the wooded policies round the first being so fine and extensive as to form a prominent feature in the scenery along the lower part of Strath Conan. The only object of antiquarian interest is the ruined square tower of Fairburn. Tarradale was the birthplace of the great geologist, Sir Roderick Impey Murchison, Bart. (1792-1871). The parish is composed of the old parishes of Urray and Kilchrist, of which the latter is separately noticed. In the presbytery of Dingwall and synod of Ross, it gives off part of its civil territory to the *quoad sacra* parishes of Carnoch and Kinlochluichart; and the living is worth £410 a year. The parish church, near the mouth of the Orrin, is old; and

there is a Free church at Muir of Ord, and a small Episcopal church at Highfield. Under the school board the Marybank and Tarradale schools, with accommodation for 137 and 180 pupils respectively, had in 1884 attendances of 95 and 168, and grants of £57, 6s. 9d. and £104, 8s. The chief landowner is John Stirling, Esq. of Fairburn, and 3 others hold each an annual value of more, 5 of less, than £2000. Valuation (1860) £9586, (1885) £15,447, of which £14,697 was for the Inverness-shire portion. Pop. (1801) 2083, (1831) 2768, (1861) 2355, (1871) 2308, (1881) 2427, of whom 1175 were males and 1252 females, while 34 (17 males and 17 females) were in the Inverness-shire portion, and the rest in Ross-shire. Houses (1881) 495 inhabited, 9 uninhabited, and 1 being built, of which 6—all inhabited —were in Inverness-shire.—*Ord. Sur.*, shs. 81, 82, 1881-82.

Urr, Bridge of, a hamlet in Kirkpatrick-Durham parish, Kirkcudbrightshire, on the left bank of Urr Water, 4 miles N by E of Castle-Douglas.

Urr, Haugh of. See HAUGH OF URR.

Urr Water, a river of Kirkcudbrightshire, issuing from bleak Loch Urr (5 × 4 furl.; 680 feet), at the meeting-point of Glencairn, Dunscore, and Balmaclellan parishes, and flowing 27¼ miles south-by-eastward along the boundaries of Dunscore, Balmaclellan, Kirkpatrick-Durham, Parton, Crossmichael, Urr, Buittle, and Colvend, till it falls into the Solway Firth near the little island of Hestan, midway between the Nith and the Dee. Its tributaries are numerous, but, excepting Kirkgunzeon Lane or Dalbeattie Burn, they are all individually inconsiderable. About 4¼ miles before losing itself in the Solway, it begins to expand into an estuary, which, with a maximum breadth of 1⅛ mile, embosoms Rough Island. The Urr is naturally navigable for considerable craft 3 miles above its incipient expansion, or 7¼ above its embouchure, and could easily, at small expense, be deepened over this distance, and rendered navigable higher up. It affords good sea-trout and fairish river-trout fishing; whilst salmon are caught in considerable quantities in wet summers; but in dry seasons sea-fish can get but little higher than the flow of the tide. For a number of miles after issuing from Loch Urr, it holds its course through a wild country and over an irregular channel; but it eventually begins to show some strips of level and fertile ground upon its banks; and from the point where it begins to run along the margin of the parish of Urr, it pursues its way among increasingly level and cultivated grounds.—*Ord. Sur.*, shs. 9, 5, 1863-57.

Ury, a troutful stream of Aberdeenshire, rising 4¼ miles SSE of Huntly, and winding 19¾ south-eastward through or along the boundaries of Gartly, Drumblade, Insch, Forgue, Culsalmond, Oyne, Rayne, Chapel-of-Garioch, Keithhall, and Inverurie parishes, till it falls into the Don a little below the town of Inverurie.—*Ord. Sur.*, shs. 86, 76, 1876-74.

Ury. See URIE.

Ushenish, a headland on the E coast of South Uist island, Outer Hebrides, Inverness-shire. A lighthouse, built on it in 1857 at a cost of £8809, shows a fixed red light, visible at a distance of 18 nautical miles.

Ussie, Loch. See FODDERTY.

Uyea, an island of Unst parish, Shetland, ¼ mile S of Unst island, from which it is separated by Uyea and Skuda Sounds. With an utmost length and breadth of 1⅝ and 1 mile, it rises to a height of 183 feet. Pop. (1841) 23, (1871) 9, (1881) 5.

V

VAILA, an island of Walls parish, Shetland, in the mouth of Vaila Sound, within ¼ mile of the nearest point of the Mainland. It has an utmost length and breadth of 1½ and 1¼ mile. Vaila Sound, running up to the vicinity of Walls church, is well sheltered, and forms an excellent natural harbour. Pop. of island (1841) 29, (1881) 9.

Vallay, an island of North Uist parish, Outer Hebrides, Inverness-shire, separated from the NW side of North Uist island only by a narrow sound, dry at low water. It measures 2½ miles in length from ENE to WSW, and 3 furlongs in mean breadth; and has a light, sandy, fertile soil. Pop. (1841) 59, (1861) 56, (1871) 48, (1881) 29.

Valleyfield. See PENICUIK.

Valleyfield House, a handsome and commodious mansion, with beautiful grounds, in Culross parish, Perthshire (detached), 1½ mile ENE of Culross town. Its owner, Rt. Wm. P. C. Campbell-Preston, Esq. of Valleyfield and Ardchattan (b. 1865; suc. 1870-78), holds 674 acres in Perth and 8000 in Argyll shire, valued at £1113 and £1342 per annum.—*Ord. Sur.*, sh. 39, 1869.

Valtos, a village on the E coast of Kilmuir parish, Isle of Skye, Inverness-shire, 13½ miles N by E of Portree. It may be called the home of the crofter agitation, and was the scene of a great disturbance on 30 Jan. 1885.

Valtos, a village in Uig parish, Lewis, Ross-shire, on the SW shore of salt-water Loch Roag, 34 miles W of Stornoway. Pop. (1871) 310, (1881) 332.

Varrich Castle. See TONGUE.

Vat, a cave and a burn in Glenmuick parish, Aberdeenshire. The cave, opening vertically, and shaped somewhat like a vat, was a retreat of the famous freebooter Gilderoy. The burn traverses the cave, augmenting its romantic appearance, and passes into the W end of Loch Kinord.

Vaternish or **Waternish.** See DUIRINISH.

Vatersay or **Watersay,** an island of Barra parish, Outer Hebrides, Inverness-shire, immediately S of Barra island, and 11 miles N by W of Barra Head. It is separated from Barra island by Vatersay Sound, studded with islets, and so narrow in one part as to afford passage to only small boats; and from Fladda and Sanderay islands, on the S, it is separated by the Sound of Sanderay, ⅝ mile broad. It measures, at extreme points, 3 miles from E to W and 2½ from N to S, but is so deeply indented by the sea as to possess an area of not more than 3·9 square miles, being almost bisected near the middle by two bays on opposite sides, one of them forming an excellent natural harbour. It chiefly consists of two hills and a low sandy intervening isthmus; commands from its hills a comprehensive and picturesque view of the entire southern group of the Outer Hebrides; rests on a basis of gneiss rock; and undergoes constant change of surface, from shiftings, accumulations, and dispersions of drift sand. Pop. (1841) 84, (1861) 32, (1871) 23, (1881) 19.

Vatsker, a village in Stornoway parish, Outer Hebrides, Ross-shire, on the W coast of Broad Bay, 7 miles NNE of Stornoway town. Pop. (1861) 316, (1871) 376, (1881) 396.

Veatie, Loch. See VEYATIE.

Vementry, an island of Sandsting parish, Shetland, on the S side of St Magnus Bay, within 1 furlong of the nearest point of the Mainland, and 3¼ miles E of Papa Stour. It has an utmost length and breadth of 2¼ and 1¼ miles; is deeply indented by the sea; contains five little fresh-water lakes; attains a height of 297 feet; and is heathy on the W, verdant on the E, affording good pasture for sheep and black cattle.

Venlaw, a mansion in Peebles parish, Peeblesshire, ½ mile N of the town. Built about 1782, it occupies the site of the castle of Smithfield, which, appearing on

record as early as the middle of the 14th century, belonged successively to the Dikesones and the Hays. The present proprietor, Capt. Jas. Elphinstone Erskine, R.N. (b. 1838; suc. 1877), holds 950 acres in the shire, valued at £649 per annum.—*Ord. Sur.*, sh. 24, 1864.

Vennachar, Loch, a lake on the mutual border of Callander, Aberfoyle, and Port of Monteith parishes, Perthshire. Formed by expansion of the southern head-stream of the Teith, and lying 270 feet above sea-level, it extends 3¾ miles east-by-northward to within 2¼ miles of the town of Callander; and has a maximum breadth of 5¼ furlongs. The picturesque valley in which it lies has been rendered famous as the main scene of Scott's *Lady of the Lake;* and it takes its name, signifying 'the lake of the fair valley,' from the loveliness of its environments, having a beautiful sinuous cincture, charmingly wooded shores, and finely graduated flanks, overlooked in the distance by grandly imposing mountains. Its upper reaches are very fine; but the lower are somewhat tame, and are by no means improved by some storage embankments connected with the Glasgow waterworks. (See Coilantogle.) A wooded bank on the N shore bears the name of Coillebhroine ('wood of lamentation'), from a legend of a malignant water-kelpie; and on the S shore stands the mansion of Invertrossachs, which was occupied by the Queen in 1869. Its waters contain some salmon, very fine trout, perch, and large pike.—*Ord. Sur.*, sh. 38, 1871.

Veyatie, Loch, a lake on the mutual border of Assynt parish, Sutherland, and Lochbroom parish, Cromartyshire, 4½ miles WNW of Altnakealgach inn. Lying 366 feet above sea-level, it extends 4 miles north-westward, varies in breadth between 1 and 3½ furlongs, contains salmo-ferox and plenty of fine trout, at its head receives a stream flowing ½ mile from Cama Loch, and sends off another 9 furlongs west-north-westward to Fewin or Fionn Loch.—*Ord. Sur.*, sh. 101, 1882.

Vigeans, St. See St Vigeans.

Vogrie, a plain mansion of recent erection in Borthwick parish, Edinburghshire, near the left bank of Tyne Water, 5 miles SE of Dalkeith. Its owner, James Cumming Dewar, Esq. (b. 1856; suc. 1880), holds 1936 acres in the shire, valued at £2898 per annum, the estate having been acquired by the family about the beginning of the 18th century.—*Ord. Sur.*, sh. 32, 1857.

Voil, Loch, a beautiful lake in Balquhidder parish, Perthshire, 3¼ miles W by S of Lochearnhead station. An expansion of the river Balvag, and lying 414 feet above sea-level, it extends 3½ miles east-north-eastward, has a maximum breadth of 3 furlongs, at its head communicates with small Loch Doine, is flanked by mountains 2156 to 2467 feet high, and contains salmon, bull-trout, and loch-trout.—*Ord. Sur.*, sh. 46, 1872.

W

Wadbister, a village in Tingwall parish, Shetland, on Wadbister Voe, 11 miles NNW of Lerwick.

Walkerburn, a modern manufacturing village in Innerleithen parish, Peeblesshire, on the right bank of the Tweed, ¼ mile NNW of Walkerburn station (across the river) on the North British railway, this being 1¾ mile E by N of Innerleithen station and 10½ miles W of Galashiels. The first of its two large woollen factories was founded in 1855; and there are a post office, with money order, savings' bank, and telegraph departments, a public school, a public library, and an Established church. The last, a plain Early English structure, containing 500 sittings, was built in 1876 at a cost of £1500, and in 1883 was raised to *quoad sacra* parochial status. Pop. of village (1861) 316, (1871) 802, (1881) 1026.—*Ord. Sur.*, sh. 24, 1864.

Wallace Hall. See Closeburn.

Wallace Monument. See Abbey Craig.

Wallacestone and Standrig, a conjoint village in Polmont and Muiravonside parishes, Stirlingshire, 1½ mile SW of Polmont Junction. It has a Wesleyan chapel. Pop. (1871) 492, (1881) 334.

Wallacetown. See Ayr and St Quivox.

Wallhouse (originally *Well-house*), a modern castellated mansion, with wings and a lofty square tower, in Torphichen parish, Linlithgowshire, 3 miles NNW of Bathgate. Its owner, Andrew Gillon, Esq. (b. 1823; suc. 1846), holds 1465 acres in the shire, valued at £1521 per annum.—*Ord. Sur.*, sh. 31, 1867. See Jn. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Walls, a parish in the W of the Mainland of Shetland, whose church stands at the head of Vaila Sound, 24 miles WNW of Lerwick, under which there is a post office. The parish, containing also the post office of Sandness, 31 miles WNW of Lerwick, comprehends the ancient parishes of Walls, Sandness, Papa-Stour, and Foula; comprises the mainland districts of Walls and Sandness, and the inhabited islands of Papa-Stour, Vaila, Linga, and Foula; and is bounded on the E by Sandsting, and on all other sides by the sea. Its utmost mainland length, from N to S, is 6⅞ miles; its utmost mainland breadth is 5 miles; and its total land area is 38⅔ square miles or 24,499 acres. The islands are separately noticed. The mainland district extends southward from St Magnus Bay to the S end of Vaila Sound; includes the most westerly ground on the mainland; is indented, but not to any considerable length, by several creeks and bays; and has mostly a rocky coast, often rising to a height of over 100 feet. The interior is hilly, attaining 817 feet at Sandness Hill, 536 at Dale Hill, and 549 at Stoubrough Hill; to the E are more than thirty small fresh-water lochs. The rocks are gneiss, quartzite, granitic porphyry, and Old Red Sandstone. The soil is mostly moorish or mossy, but forms some good arable tracts. Upwards of 1000 acres are in tillage; a great extent is meadow or pasture; and abundance of peat is on the hills. R. T. C. Scott, Esq. of Melby, is chief proprietor, 2 others holding each an annual value of between £100 and £500, 2 of from £50 to £100, and 3 of from £20 to £50. Walls is in the presbytery of Olnafirth and the synod of Shetland; the living is worth £185. The parish church was built in 1743, and contains 500 sittings. The sub-parochial churches of Sandness and Papa-Stour were built in 1749 and 1806, and contain 278 and 190 sittings. There are also Free, Congregational, and Wesleyan churches; and six schools, with total accommodation for 311 children, had (1884) an average attendance of 259, and grants amounting to £215, 18s. 3d. Valuation (1860) £1651, (1884) £2187, 7s. Pop. (1801) 1817, (1831) 2143, (1861) 2570, (1871) 2579, (1881) 2262.

Walls and Flotta. See Hoy and Flotta.

Wallyford, a collier village in Inveresk parish, Edinburghshire, 1½ mile E by S of Musselburgh.

Walston, a parish in the Upper Ward, E Lanarkshire, whose church stands towards the centre, 2⅝ miles SSW of Dunsyre station, and 5⅝ NNE of the post-town, Biggar. Containing also the village of Elsrickle, it is bounded E by Dolphinton, SE by Biggar, W by Libberton, and NW by Carnwath and Dunsyre; and at its SE corner it just touches the Peeblesshire parishes of Kirkurd and Skirling. Its utmost length, from ENE to WSW, is 3⅝ miles; its utmost width is 3 miles; and its area is 4366½ acres, of which nearly 5 are water.

The ditch-like South Medwin creeps 3½ miles south-westward along all the Dunsyre and Carnwath boundary, and the Mid Ditch or Biggar Burn 2½ miles west-south-westward along most of the south-eastern border, so that the drainage goes partly to the Clyde and partly to the Tweed. Along the South Medwin the surface declines to 660, along Biggar Burn to 820, feet above sea-level; and thence it rises to 1010 feet near Hyndshillend, 1124 near Kingsknowes, 1272 near Borland, and 1689 at Black Mount on the Dolphinton border. The predominant rocks are eruptive, chiefly felspathic porphyry, clinkstone, and greenstone; but sandstone and limestone also occur. The soil in the valleys is partly sandy, partly a brownish earthy loam; whilst that of the hill-slopes is more adhesive in character, and partly extremely fertile. Nearly 63 acres are under wood; 2806 are arable; and the rest is either rough pasture or moorland. Celts, stone coffins, and a bronze tripod have been discovered in the parish; and on the high ground of Cocklaw farm are vestiges of an ancient circular camp. The parish of Walston anciently belonged to the lordship of Bothwell, and followed for three centuries the fortunes of that lordship; and it constituted a barony, consisting of the two lands or designations of Walston and Elgirig or Elsrickle. The name Walston is supposed to have been derived either from Waldef, a brother of the first Earl of Dunbar, or from one or more of some copious wells in the neighbourhood, one of which bears the designation of Siller Well, while another was anciently in some repute for its medicinal properties. The property is mostly divided between the Lockharts of Lee and Mr Woddrop of Garvald House. Walston is in the presbytery of Biggar and the synod of Lothian and Tweeddale; the living is worth £195. The parish church, built in 1789, and renovated in 1881, contains 145 sittings. There is a Free church at Elsrickle; and Walston public and Elsrickle schools, with respective accommodation for 60 and 64 children, had (1884) an average attendance of 36 and 35, and grants of £32, 2s. and £30, 9s. 6d. Valuation (1860) £2597, (1885) £3363, 3s. Pop. (1801) 383, (1841) 493, (1861) 480, (1871) 425, (1881) 340.—*Ord. Sur.*, sh. 24, 1864.

Wampherflat, a small estate, with a mansion, in the parish and near the town of Lanark.

Wamphray, a parish of Upper Annandale, Dumfriesshire, containing Wamphray station on the main line of the Caledonian railway, 8¾ miles N by W of Lockerbie, 5¼ SSE of Beattock, and 6⅞ S by E of Moffat, under which there is a post office of Wamphray. It is bounded N by Moffat, E by Hutton, S by Applegarth, and W by Johnstone and Kirkpatrick-Juxta. Its utmost length, from N by E to S by W, is 8¾ miles; its utmost width is 3⅝ miles; and its area is 20⅝ square miles or 13,189¾ acres, of which 56 are water. The river Annan flows 5½ miles south-by-eastward along or close to all the western boundary; and Wamphray Water, rising in the northern extremity of the parish at an altitude of 1480 feet, runs 8¼ miles south-south-westward through the interior till, after a total descent of 1210 feet, it falls near Wamphray station into the Annan, another of whose affluents, Dalmakeddar Burn, rising at 630 feet, runs 4 miles south-by-westward and westward, for the last 1¾ mile along the southern boundary. On Bellcraiglinn Burn, which runs to the Annan along the Moffat boundary, the linn, whence it takes its name, has much mimic sublimity and some fine accompaniments of landscape, and draws numerous visitors from among the 'wellers' at Moffat; while three cascades upon Wamphray Water, not far distant from one another, and bearing the names of the Pot, the Washing Pan, and Dubb's Caldron, are justly admired for their mingled picturesqueness and grandeur. In the south-western corner of the parish, at the influx of Dalmakeddar Burn to the Annan, the surface declines to 228 feet above sea-level, and thence it rises to 846 feet at Blaze Hill, 1272 at Fingland Fell, 975 at Dundoran, 1587 at Laverhay Height, 1561 at Craig Fell, and 2256 at Loch Fell, which culminates on the meeting-point of Wamphray, Moffat, Eskdalemuir, and Hutton parishes. All the eastern border is the watershed of a mountain-range, whose summits possess elevations of from upwards of 2200 to about 800 feet above sea-level, and almost regularly diminish in altitude as the ridge recedes from the N. Another ridge, not very much inferior in mean height, and very similar in progressive diminution, runs parallel to the former along the centre of the parish; but, a little S of the middle, is cloven quite through by the vale of Wamphray Water, debouching to the W. The low grounds are principally a considerable band along the Annan, and some small belts along the minor streams; and over most of their breadth they rise at different gradients to the skirts of the hills, so as to form hanging plains. The heights are variously conical, elongated, and tabular; those in the N are partly green and partly heathy; and those in the S either are in tillage, or produce rich and plentiful pasturage. The valleys have a pleasant appearance, and are in some places picturesque. The predominant rocks are greywacke and Old Red Sandstone. The soil along the Annan is a deep alluvium, and that in other districts is for the most part either a light-coloured clay or a light loam of different shades. About one-fourth of the entire area is in tillage; 270 acres are under wood; and the rest is chiefly hill-pasture, but partly heath and moss. Near Poldean (once a famous hostelry) a large grey monolith marks the spot where Charles II. halted with his army on the march to Worcester (1651); and the highway here follows the line of a Roman road. Not far from the parish church some fine Scotch firs adorn the site of the strong old tower of Wamphray, which in the latter half of the 16th century was held by William Johnstone, the 'Galliard.' His horse-stealing raid and his death, with Willie o' the Kirkhill's revenge for the same, form the theme of a well-known ballad, *The Lads of Wamphray.* Other antiquities are the site of a stone circle and traces of Roman and Caledonian camps. Robert Jardine, Esq., M.P., whose seat, Castlemilk, is in St Mungo parish, is the chief proprietor; 2 others holding each an annual value of more, and 6 of less, than £500. Wamphray is in the presbytery of Lochmaben and the synod of Dumfries; the living is worth £305. The parish church, 1¾ mile NE of Wamphray station, is prettily situated on the left bank of Wamphray Water, but itself is a plain structure of 1834, containing 248 sittings. Over the W door is a curious sculptured stone from the pre-Reformation chapel of Barnygill, 3 miles higher up the glen. Near the station is Wamphray U.P. church; and Johnstone and Wamphray Free church stands just across the Annan in Johnstone parish. Wamphray public and Newton girls' schools, with respective accommodation for 88 and 53 children, had (1884) an average attendance of 62 and 23, and grants of £41, 4s. and £20, 15s. 6d. Valuation (1860) £4204, (1885) £6759, 9s. 3d. Pop. (1801) 423, (1831) 580, (1861) 559, (1871) 505, (1881) 455.—*Ord. Sur.*, shs. 10, 16, 1864.

Wandell. See Lamington.

Wanlockhead, a mining village in the NE corner of Sanquhar parish, NW Dumfriesshire, 1½ mile SSW of Leadhills, 6½ miles WSW of Elvanfoot station, 8½ SSW of Abington, and 8½ ENE of the town of Sanquhar. It lies, 1350 feet above sea-level, at the head of the lonely glen of Wanlock Water, in one of the bleakest scenes of the Southern Highlands, the chief of the big, smooth hills that rise around it being Wanlock Dod (1808 feet), Green Lowther (2403), Lowther Hill (2377), and Stood Hill (1925). The mines, which alone could people so cheerless and elevated a region, are continuous with those of Leadhills on the Lanarkshire side of the frontier; and jointly with them, they extend to a circumference fully 4 miles in diameter. The Wanlockhead mines were worked as early as 1512. Gold was the primary object of search, and has not yet ceased to be found. Sir James Stampfield opened the lead mines about the year 1680, and worked them on a small scale till the Revolution. Matthew Wilson obtained in 1691 a 19 years' lease, and successfully worked the vein called Margaret's; whilst a mining company, having procured

in 1710 a 31 years' lease, commenced to smelt the ore with pit-coal, and partially worked the three veins of Old Glencrieff, Belton, and New Glencrieff, the last of which only proved compensating. The new and large Friendly Mining Society formed in 1721 a copartnership with the smelting company, and got 15 years added to the 20 which had yet to run of the lease. The two companies jointly worked all the then known four veins for 6 years, when they separated and pursued their object in different localities. But in 1734 both companies resigned their lease; and Alexander Telfer became lessee for the next 21 years. He worked the mines vigorously, and made a richly compensating discovery of a large knot of lead. In 1755, a new company, with Mr Ronald Crawford at its head, became lessees of the whole mines. Their first lease was only for 19 years; but they afterwards obtained an act of parliament extending it to 1812, and, previous to that year, they were granted a new lease to expire in 1842. The new company were enterprising and eminently successful; they discovered new and rich ramifications of the veins; and, when workable ore could no longer be found, they erected a series of steam engines, some on the surface, and some under ground, to carry off water from their borings beneath level. So successful were the operations that during 50 years 47,420 tons of lead were raised. From 1842 the Duke of Buccleuch retained the mines under his own management; and they are now worked by means of four powerful hydraulic engines and one steam engine. All the most recent mining improvements have been introduced; and the process of refining the bars for the separating of the silver from the lead is carried on simultaneously with the smelting. The present yearly average of the output is 1000 tons of lead and 5750 ounces of silver. Along with the lead ore or lead glance are small quantities of manganese, ochre, blende, brown hematite, copper pyrites, green lead ore, white lead ore, and lead vitriol. A chapel, built in 1755 by the mining company at a cost of not more than £70 or £80, in 1848 was superseded by a new church with 325 sittings, built and endowed by the Duke of Buccleuch, and raised to *quoad sacra* parochial status in 1861. It was long ere a site could be got for a Free church, and meanwhile Drs Chalmers, Guthrie, Candlish, etc., preached on the hill-side; but at length a church, with 400 sittings, was opened in 1859. Wanlockhead has also a post office, a reading society (1756), friendly and co-operative societies, an Oddfellows' lodge, a young men's association, a school, etc. Pop. of village (1831) 675, (1861) 743, (1871) 772, (1881) 788; of *g. s.* parish (1881) 854.—*Ord. Sur.*, sh. 15, 1864. See the Rev. J. Moir Porteous, D.D., *God's Treasure-House in Scotland* (Lond. 1876).

Wanlock Water, a stream of Sanquhar parish, Dumfriesshire, running 5¾ miles north-westward till, after a descent of 820 feet, it unites with Spango Water to form Crawick Water.

Wardhouse. See Kennethmont.

Wardlaw. See Kirkhill.

Ward Law. See Ettrick.

Ward-of-Cruden. See Port Errol.

Warmanbie. See Annan.

Warthill, a modern Elizabethan mansion in Rayne parish, Aberdeenshire, 1½ mile NNW of Warthill station on the Turriff and Macduff branch of the Great North of Scotland railway, this station being 3¾ miles NNW of Inveramsay Junction and 24¼ NW of Aberdeen. Its late owner, William Leslie, Esq. (1814-80), was Conservative member for Aberdeenshire 1861-66, and held 3960 acres in the county, valued at £4487 per annum.—*Ord. Sur.*, sh. 86, 1876.

Warwickhill House, a mansion in Dreghorn parish, Ayrshire, 4 miles E by N of Irvine.

Washington, a village at the mutual boundary of Coupar Angus parish, Perthshire, and Kettins parish, Forfarshire, 3½ miles NE of Coupar Angus town.

Waterbeck. See Middlebie.

Waterloo, a village in Cambusnethan parish, Lanarkshire, 1⅛ mile SE of Wishaw. Pop. (1871) 633, (1881) 855.

Waterloo. See Auchtergaven.

Watersay. See Vatersay.

Waterside, a village in Dalmellington parish, Ayrshire, on the right bank of the Doon, 3½ miles NW of Dalmellington town. It has a railway station, a public school, and ironworks (1847). Pop. (1871) 1681, (1881) 1473.—*Ord. Sur.*, sh. 14, 1863.

Waterside, a hamlet in Fenwick parish, Ayrshire, 6 miles NE of Kilmarnock, under which it has a post office.

Waterside, a village in Kirkintilloch parish, Dumbartonshire, 2 miles ESE of the town. Pop. (1871) 426, (1881) 420.

Waterside, a mansion in Keir parish, Dumfriesshire, near the influx of Scar Water to the Nith, 2¼ miles SSE of Penpont.

Watling Street, a Roman road from Yorkshire in England to the E end of Antoninus' Wall in Scotland. After crossing the walls of Hadrian and Severus, and passing the stations of Risingham and Roechester, it arrives through a rugged country, by way of the Golden Pots on Thirlmoor, at Chewgreen, the Roman post nearest the Border. Approaching Scotland in a north-north-westerly direction, it first touches it at Brownham Law, near the sources of Coquet Water; and, after having divided the kingdoms for 1½ mile, enters Scotland at Blackhall Hill, on the boundary between Oxnam and Hounam in Roxburghshire. From this point it runs 12 miles north-westward to the Teviot, near the mouth of the Jed; forming for a long way the boundary between Oxnam and Hounam; traversing small wings of Oxnam, Jedburgh, and Crailing—passing some vestiges of a station, just before reaching the Teviot—and crossing the Kail at Towford, the Oxnam a little below Capehope, and the Jed a little below Bonjedward. Near the points respectively of its passage beyond the Oxnam and beyond the Teviot, it seems to have sent off one branch northward into Roxburgh, and another deviatingly round the N side of Penielheugh. The main line, however, leads through the enclosures of Mount Teviot; passes along the S side of Penielheugh; forms for 3½ miles the NE boundary of Ancrum; passes over St Boswell's Green, and crosses Bowden Burn above Newton, where its remains are very distinct; and thence moves forward to the eastern base of the Eildon Hills, and to the Tweed above Melrose and near Gattonside, amidst an unusually large number of Roman and British camps and fortifications. After passing the Tweed, the road bends from its hitherto north-westerly to a northerly direction; proceeds up Melrose parish and the detached and projecting section of Lauder, on a line nearly parallel with the Leader, but inward from its vale; passes Roman stations at Chesterlee above Clackmae, and at Walls near New Blainslee; becomes very distinct throughout 1½ mile; and then, about ½ mile ENE of Chieldhelles chapel, enters Lauderdale. The road appears to have passed on the W side of Lauder town and E of Old Lauder, where there are remains of a military station; and about 1½ mile onward it again becomes visible, takes for a brief way the name of the Ox-road, and leads up to a strong station, called Black Chester. From this post it passes on by the W of Oxton, crosses the western head-stream of the Leader, and leads on in a distinctly marked line to the Roman station at Channelkirk; thence it proceeds forward to far-seeing Soutra Hill, in the small projecting district of Haddingtonshire; and descending thence it turns to the left, pursues a north-westerly direction, and traverses the parishes of Midlothian onward to Currie, which stands in a bend of the Water of Leith, 6 miles SW of Edinburgh. Between Soutra Hill and Currie, it crossed the South Esk near Dalhousie Castle, and the North Esk near Mavisbank, where many Roman antiquities have been found; and thence it pursued its course by Loanhead and Straiton, which probably owe their names to its neighbourhood, to Bow Bridge, at the E end of the Pentland Hills. Beyond Currie it proceeded to the naval station on the Forth at Cramond; and thence it crossed the Almond into Linlithgowshire, and passing Barnbougle Hill, went along Ecklin Moor to Carriden.

The great western Roman road, or that which came up Annandale, crossed into Crawford, and went down the valley of the Clyde, is also in some localities called Watling Street.

Watten, a parish, containing a hamlet of the same name, near the centre of the eastern portion of Caithness. It is bounded N by the parishes of Bower and Wick, E by the parishes of Wick and Latheron, S by the parishes of Latheron and Halkirk, W by the parish of Halkirk, and NW by the parish of Bower. The shape is an irregular oblong, measuring about 7 by 6½ miles, with a projection about 3 miles long and 1½ mile wide passing S from the S side, and another small foot-shaped projection standing out for 1¼ mile at the SW corner. The boundary line on the N is artificial, but elsewhere it is largely natural, following from Wick Water northward the high ground between the Achairn and Strath Burns—two tributaries of the Wick—to the Moss of Leanas, where it cuts across the Camster Burn, curves round the high ground at Hill of Bigcus (628) and Stemster Hill (815)—this portion forming the southern projection—and thence N by W to Spital Hill (577) between Spital Quarries and Banniskirk Quarries, and thereafter irregularly north-eastward back to the northern boundary W of Loch Watten. The extreme length of the parish, from North Watten Moss on the N, 2 miles N of Loch Watten, southward to Hill of Bigcus, is 11¼ miles; the average breadth of the greater part of it is 6 miles; and the total area is 31,751·549 acres, of which 1172·134 are water. The height of Loch Watten is 55 feet above sea-level, and from this the surface undulates upward in all directions except due E, reaching a height of 300 feet or over along the greater part of the western, south-eastern, and eastern borders, and of from 70 to 200 feet on the NE. One-fourth part of the parish to the N is mostly under cultivation, but the rest is moor and rough grazing land. There are, what is rare in Caithness, a few acres of woodland. The soil varies from stiff friable clay and loam to moorish earth, the latter being most abundant. The underlying rock is Old Red Sandstone, but in the form of flagstone, which is worked on the NW at Spital Quarries. Near the N end of the parish is the large Loch Watten (2⅝ miles × ⅝ mile; 55 feet); near the centre of the W side, 2⅝ miles SW of Loch Watten, is Loch of Toftingale (¾ × ⅜ mile; 235 feet); and in the SW and S are the small lochans called the Dubh Lochs of Shielton and the Dubh Lochs of Munsary. The drainage of the northern part of the parish is carried off by the streams flowing to Loch Watten and the upper 1⅝ mile of Wick Water, which issues from the E end of the loch; in the SW the drainage is carried off by the streams flowing to Loch of Toftingale, by the Burn of Acharole issuing from it, and smaller streams flowing to the latter; and in the S and E by the Strath Burn and the smaller streams flowing to it. The Strath and Acharole Burns unite ½ mile S of the hamlet of Watten, and the joint stream enters Wick Water immediately after it has left Loch Watten. There is good fishing both in Loch Watten and in Loch of Toftingale, the trout in the former being from ½ lb. to 3 lbs., and in the latter about ½ lb. Loch Watten is preserved, but the other is open to the public. There are traces of stone circles at Halsary and Moss of Wester Watten, and of Picts' houses or weems; and NW of the church at Stonehone is a standing-stone, said to mark the burial place of Skuli, Jarl of Orkney, who, according to Torfaeus, was buried at Hofn, though Hofn is more probably rather to be identified with Huna. Backlass, 2 miles W by S of the village, was in the end of last century the dwelling-place of a noted robber, David Marshall, who seems to have been a northern Rob Roy. To the N of Loch Watten the parish is traversed for 4½ miles by the Georgemas and Wick portion of the Highland Railway, with a station at the E end of the loch, 153¾ miles NE of Inverness, and 7½ WNW of Wick. Bower station also is close to the NW border of the parish. To the S of the loch is one of the main lines of road from Wick to Thurso, which passes through the parish for 5½ miles; and the road from Thurso to Latheron runs for 1 mile across the SW corner. There are also in the N a number of good district roads. The hamlet, the old name of which was Achingale, is near the E end of the loch, and has a post office. There are fairs at the church on the last Tuesday of October *o. s.*, and the first Tuesday of November, and at Stonehone on the fourth Tuesday of December. Watten is in the presbytery of Caithness and synod of Sutherland and Caithness, and the living is worth £311 a year. The parish church, a very old building with 750 sittings, is near the station, a short distance NE of the loch; and there is a Free church at the village. Under the school board Gersa, Lanergill, and West Watten schools, with accommodation for 70, 110, and 103 pupils respectively, had in 1884 attendances of 39, 49, and 67, and grants of £44, 6s. 9d., £41, 2s. 9d., and £74, 11s. 6d. The chief proprietors are Sir Robert Anstruther of Balcaskie, Bart., and Thomas Adam, Esq. of Lynegar, and the rest of the land is almost entirely in the hands of the Duke of Portland, E. W. Horne, Esq. of Stirkoke, and W. S. T. Sinclair of Freswick. Valuation (1860) £5947, (1885) £8611, 14s., including £503 for railway. Pop. (1801) 1246, (1831) 1234, (1861) 1491, (1871) 1453, (1881) 1406.—*Ord. Sur.*, sh. 116, 1878.

Wattston, a village in New Monkland parish, Lanarkshire, 3¼ miles N by E of Airdrie. Pop. (1881) 324.

Wauchope. See Langholm.

Wauchope, a mansion in Hobkirk parish, Roxburghshire, 10 miles SE of Hawick. Its owner, Walter Macmillan Scott, Esq. (b. 1848; suc. 1862), holds 3488 acres in the shire, valued at £2352 per annum.—*Ord. Sur.*, sh. 17, 1864.

Waulkmills, a village in St Vigeans parish, Forfarshire, 2 miles N by W of Arbroath.

Wedale. See Stow.

Wedderburn Castle, a Grecian mansion in Duns parish, Berwickshire, 2 miles ESE of the town.

Weem (Gael. *uaimh*, 'a cave'), a village and a parish of Perthshire. The village, on the N side of the Tay, 1 mile NW of Aberfeldy, has a good hotel and a public school.

The parish lies dispersed in separate and far distant portions, over well-nigh a fourth of Perthshire, from near the head of Glenlochy on the W, to the vicinity of Loch Freuchie on the E, and from 3 miles S of Loch Tummel on the N, to within 3¼ miles of Loch Earn on the S. It claims, at 22 miles distance from its parish church, the very nearest farm to the church of Killin; and it has other farms at a still greater distance, some of them upwards of 30 miles, both in Glenlochy and Glenlyon. With a total area of 67½ square miles, its districts are eleven in number, all mutually detached, all intermixed with wings and detachments of Logierait, Dull, Fortingall, Kenmore, Killin, Comrie, and Little Dunkeld, and several of them possessing a very irregular outline; so that any brief attempt at a topographical description of them would either be abortive, or would involve a miniature picture of nearly one-fourth of the county. Enough that its principal features are noticed in our articles on Achmore, Castle-Menzies, Comrie, Glassie, etc. The rocks are mainly metamorphic; and the soil is very various in the different districts, and even in different parts of each of several of the districts, but may be described, in general, as wet and marshy in a few places, as light and gravelly in the highest parts, and as a strong fertile loam throughout much of Weem proper. The principal landowners are Sir Robert Menzies, Bart., and the Earl of Breadalbane. Giving off portions to Innerwick and Amulree *quoad sacra* parishes, Weem is the seat of a presbytery in the synod of Perth and Stirling. The living is worth £215. The parish church was built in 1835, and contains 561 sittings. In the E end of the old church, which is still standing, is a curiously sculptured monument, with a Latin inscription, to Sir Alexander Menzies, who died in 1624. The private Episcopal chapel of St David was consecrated in 1878. The public school, with accommodation for 67 children, had (1884) an average attendance of 63, and a grant of

£51, 16s. Valuation (1866) £5615, 0s. 3d., (1885) £6287, 17s. 9d. Pop. (1801) 1337, (1831) 1209, (1861) 692, (1871) 520, (1881) 474, of whom 397 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 55, 47, 46, 1869-72.

Weir or **Viera**, a triangular island of Rousay parish, Orkney, separated from the SE side of Rousay island by Weir Sound, which is 4½ furlongs to 1 mile broad, and approaching at its western apex to within 1½ mile of Pomona. Its length, from ENE to WSW, is 2⅝ miles; its utmost breadth is 7½ furlongs; and its surface is low, its soil very fertile. There are on it the ruins of a church and vestiges of a fortification. Pop. (1831) 93, (1851) 62, (1871) 78, (1881) 80.

Weir, Bridge of, a village in Kilbarchan and Houston parishes, Renfrewshire, on the river Gryfe, 3¼ miles NW of Johnstone and 7 W by N of Paisley. Owing its existence to the establishment of two large cotton mills in its vicinity in 1792 and 1793, it has a post office under Johnstone, with money order, savings' bank, and telegraph departments, a railway station, a branch of the Clydesdale Bank, a good hotel, a water-supply of 1881, a bowling-green, a public school, an Established chapel of ease (1879), and a Free church (1826, formerly Original Burgher). Pop. (1861) 1443, (1871) 1315, (1881) 1267, of whom 715 were in Kilbarchan.—*Ord. Sur.*, sh. 30, 1866.

Weisdale. See Tingwall.

Wellbank, a post office under Dundee, in Monifieth parish, Forfarshire, 6 miles N of Broughty Ferry.

Wellfield, a mansion on the northern outskirt of Duns, Berwickshire.

Wellfield, a mansion in Strathmiglo parish, Fife, 1½ mile W by S of the town.

Wellhall, a mansion in Hamilton parish, Lanarkshire, 1¼ mile W of the town. Purchased by him in 1874, it was the death-place of the miners' advocate, Alex. Macdonald, M.P. (1823-81).—*Ord. Sur.*, sh. 23, 1865.

Wells House, a mansion in the N of Hobkirk parish, Roxburghshire, near the left bank of Rule Water, 3 miles ESE of Denholm. See Stobs Castle.

Wellwood, an estate of 17,566 acres in Muirkirk parish, Ayrshire, on the river Ayr, 2¼ miles WSW of Muirkirk town. It was purchased in 1863 for £135,000 by James Baird, Esq. of Knoydart and Cambusdoon (1803-76); and his nephew and successor, John Baird, Esq. (b. 1852), has built on it a good mansion.—*Ord. Sur.*, sh. 15, 1864. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Wemyss, a parish on the S coast of Fife, is bounded NW by Markinch, N by Markinch and Scoonie, E by a detached section of Markinch, SE by the Firth of Forth, and SW by Dysart. Its greatest length, from NE to SW, is 6¾ miles; its greatest breadth is 2¼ miles; and its total area is 4891¾ acres, of which 154½ are foreshore, and 4¾ water. The coast-line of about 6 miles is bold and very rocky, though not bounded by any very lofty cliffs. On the coast, between the villages of West Wemyss and Buckhaven, there are eight or ten rock caves, some of them of large extent, and all above high-water mark. One of the largest, the Glass Cave, was used as one of the earliest glass-works in this country, while the Court Cave, to the E of East Wemyss, derives its name from an encounter said to have occurred in it between James V. and some Gipsies. In several of the caves there are a number of curious inscriptions, which have been fully described in a pamphlet by the late Sir James Y. Simpson. The name of the parish is derived from the Gaelic *uaimh*, 'a cave.' Between the villages of East and West Wemyss, close to the shore, there is a narrow stretch of links, which is used as a golfing ground.

The surface of the parish in some places immediately above the shore is considerably elevated, and rises in a general slope towards the N and W, attaining 215 feet at Bowhouse, 260 at Earl's Seat, 147 at Perceval, and 121 at Muiredge. The river Leven runs along its N boundary for 1¼ mile. The rocks belong chiefly to the Carboniferous formation; those in the NE and centre are mainly dark red sandstone. The beach between East and West Wemyss is covered with blue whinstone ice-borne boulders; in the SW and E a large quantity of coal and some sandstone are found. The coal is worked in about 13 mines. The soil is in some places sandy and shallow, but in others of a strong, dark-coloured, clayey character, and of great depth. Fishing is an important industry along the coast, especially at Buckhaven; and the linen manufacture employs a good number of hands, chiefly at East Wemyss, where there is a factory. The coal and mineral trade formerly centred in West Wemyss; but a wet dock with a draught of 32 feet at low water is at present being constructed at Methil by Mr R. G. Erskine Wemyss, at an estimated cost of over £100,000, which will attract much of the shipping, especially since most of the coal is now raised in pits in the E of the parish. The chief landowner in the parish is Mr R. G. Erskine Wemyss of Wemyss and Torrie, who is superior of all lands in the parish.

The parish contains the towns of Buckhaven (2952) and West Wemyss (1178), the villages of East Wemyss (895), Coaltown of Wemyss (422), Methil (819), Kirkland of Methil (331), and Methilhill (483). The principal mansion is Wemyss Castle, the seat of R. G. Erskine Wemyss, Esq., situated on a cliff about 35 feet above the level of the sea, a little to the E of the village of West Wemyss. It is a large and weather-beaten building—part of it of considerable antiquity—and forms a fine feature in the landscape as seen from the sea. Mary Queen of Scots met Darnley for the first time within its walls in 1565. Charles II. spent a day in it in July 1650, and slept a night there in July 1657. There is preserved in it a large silver basin, which was given in 1290 by the King of Norway to Sir Michael Wemyss of Wemyss, on occasion of that knight and Sir Michael Scott of Balwearie appearing at the Norwegian court as ambassadors from Scotland to bring home the Princess Margaret. More accounts than one are given of the origin of the family of Wemyss; but all agree as to their being derived from the family of Macduff, Mormaer of Fife in the reign of Malcolm Ceannmor. The family of Wemyss, therefore, is one of the very few Lowland families which, through the male line, can claim kindred with Celtic blood. The lands now forming the parish of Wemyss are said to have been part of the estate of Macduff, Shakespeare's well-known thane of Fife, during the reign of Malcolm Ceannmor; and a little to the E of East Wemyss, immediately above the Well Cave, there is an extensive ruin, of red sandstone, known as Macduff's Castle, which, according to tradition, was a stronghold of the great thane. The present proprietor of the Wemyss estate, Robert Gordon Erskine Wemyss, Esq. (b. 1858; suc. 1864), is said to be the 27th in direct descent from Hugo, the second son of Gillimichael, who was third in descent from Macduff. The Fife estates of the family comprise 8925 acres, valued at £17,806 per annum. Wemyss gives the title of Earl of Wemyss to a scion of the noble family of Douglas. (See Gosford.)

The Rev. George Gillespie, who figured in the ecclesiastical affairs of the 17th century, was minister of Wemyss for about 4 years. Besides Macduff's Castle the antiquities in the parish include the ruins of an ancient chapel within the grounds known as Chapel-Garden, ¼ mile W of West Wemyss.

A branch railway from Thornton Junction of the North British railway traverses the parish to Buckhaven, with intermediate stations called West Wemyss and Wemyss Castle. This branch line, 4¼ miles long, was opened in 1881, and cost about £20,000. A short reach of the North British railway (about 6 furlongs), between Dysart and Thornton, also falls within the boundaries of the parish in the extreme W.

Wemyss parish is in the presbytery of Kirkcaldy and synod of Fife; the living is worth £480. The parish church is at East Wemyss; and there are *quoad sacra*

churches at Methil and West Wemyss. There are Free churches at East Wemyss and Buckhaven, and two U.P. churches at Buckhaven. The accommodation, average attendance, and government grants of the schools in this parish in the year 1884 were as follows: Buckhaven amalgamated public school, 800, 490, £425; Cross Roads public school, 300, 297, £260; East Wemyss senior and junior departments, 400, 192, £172. Coaltown and West Wemyss schools (both the property of Mr Wemyss) together accommodate 390.

A water-supply was introduced all over the parish, under the Public Health Act, about 1877, at a cost of £25,000; and a gaswork midway between Buckhaven and East Wemyss supplies both places with gas. Valuation (1856) £14,484, 18s., (1885) £33,727, 16s. 5d., exclusive of £1767 for railways. Pop. (1801) 3264, (1831) 5001, (1861) 5970, (1871) 6400, (1881) 7307, of whom 3808 were in Wemyss ecclesiastical parish.—*Ord. Sur.*, sh. 40, 1867.

Wemyss Bay, a small watering-place in Innerkip parish, Renfrewshire, on the Firth of Clyde, immediately N of Skelmorlie in Largs parish, Ayrshire, and at the terminus of the Greenock and Wemyss Bay railway (1865), 8 miles SW of Upper Greenock and 30½ W of Glasgow. It has a post office, with money order, savings' bank, and telegraph departments, a branch of the Clydesdale Bank, an hotel, a steamboat pier, and an English Episcopal church (1879)—a pretty Gothic red sandstone edifice, with a fine chime of 8 bells.—*Ord. Sur.*, sh. 29, 1873.

Wemyss, East, a village in Wemyss parish, in the S of Fife, is situated on the shore, about 1 mile SSW of Buckhaven, and 1¼ NE of West Wemyss. It has a station, called Wemyss Castle, on the branch railway, opened in 1881, between Thornton and Buckhaven. Its houses are well built and comfortable; and its whole appearance is above the average of villages on the E coast. The red-tiled roofs give it an exceedingly picturesque appearance, as seen from a little distance. The pretty cemetery occupies the summit of a well-wooded elevation, a little to the NE. The parish church, an old cruciform building, estimated to hold about 1000 persons, stands near the centre of the village; and the Free church, an unassuming edifice, seated for 380, at the W end. There are two public schools at East Wemyss, already noted under the parish. An ornamental cottage hospital was erected by Mr R. G. Erskine Wemyss in 1883 at a cost of £1200. It contains a surgical and two medical wards, with 24 beds in all, besides accommodation for nurses. There is a reading-room in the village, with a library attached. There is a small brewery at East Wemyss, but the chief industry of the place is the manufacture of ducks, dowlas, sheetings, and dyed linens, carried on in an old-established factory employing 200 hands, and capable of turning out 2,500,000 yards of cloth annually. Pop. (1831) 753, (1861) 799, (1871) 777, (1881) 846.

Wemyss Hall, a mansion in Cupar parish, Fife, 1½ mile S of the town. Its owner, James Balfour Wemyss, Esq. (b. 1828; suc. 1871), holds 1490 acres in the shire, valued at £2852 per annum.—*Ord. Sur.*, sh. 40, 1867.

Wemyss, West, a small town in Wemyss parish in the S of Fife, is situated on the coast, 2 miles NE of Dysart. The nearest station, though bearing the name of the village, is very inconveniently situated about a mile away, on the branch line referred to under East Wemyss. Consisting mainly of one street, West Wemyss has a less prosperous and comfortable air than East Wemyss, although its population is considerably greater. About the centre of the village is the town-hall, with a curious foreign-looking tower. The only church is the *quoad sacra* parish church. There is a post and telegraph office under Kirkcaldy. West Wemyss formerly carried on a brisk manufacture of salt; and so maintained a good harbour. Although the manufacture has now ceased, the harbour is still kept up on account of the considerable coal traffic which passes through it. In 1872-73 a wet dock was constructed at a cost of about £10,000, covering about an acre, with a depth of water of 18½ feet, and a berthage of 450 feet. As a burgh of barony West Wemyss is governed by 2 bailies, a treasurer, and 4 councillors. Pop.—which is almost entirely mining—(1831) 858, (1861) 1128, (1871) 1231, (1881) 1206.

West Arthurlee, etc. See Arthurlee, West, etc.

Westcraigs, a station on the North British railway, 5¼ miles W by S of Bathgate.

Westerdale, a place with a post office, Free church, and public school, in Halkirk parish, Caithness, on the right bank of the river Thurso, 13 miles S of Thurso.

Westerhall. See Westerkirk.

Westerkirk, a parish of Eskdale, NE Dumfriesshire, whose church, centrally situated, stands on the left bank of the Esk, 6 miles NW of the post-town, Langholm. The parish is bounded NE by Roberton in Roxburghshire, E by Ewes, SE and S by Langholm, SW by Tundergarth and Hutton, and W and NW by Eskdalemuir. Its utmost length, from N to S, is 10⅛ miles; its utmost breadth, from E to W, is 6⅞ miles; and its area is 42⅜ square miles or 27,152 acres, of which 160 are water. The river Esk, formed at the western verge of the parish by the confluence (490 feet above sea-level) of the Black and White Esks, winds 9¾ miles east-south-eastward, for the last 9 furlongs along the Langholm boundary. Nearly midway in this course it is joined by Meggat Water, which, rising at an altitude of 1200 feet in the northern extremity of the parish, runs 7¼ miles south-by-westward, and itself receives Stennies Water, rising at 1480 feet, and flowing 5½ miles south-south-westward. Thirteen smaller rills fall into Meggat Water, and twenty into the Esk. In the E, where the Esk leaves the parish, the surface sinks to 395 feet above the sea; and chief elevations to the S of the river are Bombie Hill (1136 feet) and Cauldkine Rig (1478); to the N, Great Hill (1434), Westerker Rig (1102), Dod Fell (1519), and Faw Side (1722), the last near the meeting point of Westerkirk, Ewes, and Roberton parishes. Thus, though hilly, this parish is nowhere mountainous; and its hills are mostly verdant and finely pastoral. Greywacke and greywacke slate are the predominant rocks; and secondary trap, generally in the form of caps, occurs on the summit of some of the hills. At Jamestown upon Glendinning farm, on the left bank of Meggat Water, 5 miles NNW of the church, an antimony mine was worked from 1793 to 1798, and yielded during that period 100 tons of regulus of antimony, worth £8400. A mass of iron, rudely resembling two 4-inch cubes placed together, was discovered on Hopsrig farm in March 1881, and gave rise to discussion as to whether it was meteoric or an ancient artificial British 'bloom.' The soil on the low grounds along the Esk is a light and fertile loam; on the rising ground is a deep strong loam; and on the tops of many of the hills degenerates into moss. Rather less than one-seventeenth of the entire area is either arable or meadow land; some 200 acres are under wood; and nearly all the rest is hill-pasture. Antiquities are vestiges of hill-top camps, supposed to have been outposts of the Roman station of Castle-O'er in Eskdalemuir; traces along the vale of the Esk of a supposed chain of communication between Castle-O'er and Netherbie; and a triangular and seemingly very ancient fortification on the farm of Enzieholm; whilst till lately there existed the remains of a stone circle on the peninsula of the Esk and Meggat Water. The road from Langholm to Ettrick and Yarrow passes up the vale of the Esk. The Duke of Buccleuch, though a large proprietor, has no seat in the parish. Craigcleuch, a very handsome mansion, 2½ miles NNW of Langholm, was erected by the late Alex. Reid, a wealthy manufacturer of that town. Burnfoot, a beautifully situated house, 3½ miles NNW of Langholm, is the seat of William Elphinstone Malcolm, Esq. (b. 1817; suc. 1838), who holds property in the parish of £700 annual value. His father, Admiral Sir Pulteney Malcolm (1768-1838), was born at Douglan, and his uncle, Gen. Sir John Malcolm (1769-1833), at Burnfoot. (See Langholm.) Westerhall, 5 miles W

of Langholm, is beautifully situated near the Esk's left bank, backed by steep hills, and embosomed in wood. It suffered great damage by fire in Feb. 1873, but has been restored. Held by his ancestors for 400 years, the estate belongs now to Sir Frederick John William Johnstone, eighth Bart. since 1700 (b. and suc. 1841), Conservative member for Weymouth since 1874, and owner of lands in the parish valued at £3600 per annum. His great-great-uncle, Sir William Johnstone, who died in 1805, was a member of seven successive parliaments, and acquired a large property in America, besides the borough of Weymouth. Other illustrious natives were William Pulteney, Earl of Bath (1682-1764), Sir Robert Walpole's opponent; and Thomas Telford (1757-1834), the celebrated engineer. He was the posthumous son of a shepherd, and was brought up with difficulty by his poor and widowed mother. After receiving an elementary education at the parish school, he was apprenticed at an early age to a builder, and worked for some years as a stonemason. A stone to his father's memory in the churchyard is said to have been chiselled by him. He afterwards rose to great fame as an architect, and amassed an enormous fortune. There is a monument to his memory in Westminster Abbey. He bequeathed a considerable sum of money 'to the minister of Westerkirk in trust for the parish library.' The bequest yields a handsome annual interest for the purchase of books, which now number nearly 6000 volumes. Probably no rural parish in the kingdom can boast of such a collection. In 1860 it was found necessary to provide increased accommodation for the library, and a very neat and commodious building was erected, by public subscription, at Old Bentpath. Westerkirk is in the presbytery of Langholm and the synod of Dumfries; the living is worth £400. The parish church, a handsome Gothic building, with a massive square tower and 350 sittings, was opened in Dec. 1881. The Johnstone family mausoleum, in the churchyard, presents a handsome circular colonnade of fluted Doric pillars surmounted by a beautifully carved frieze and an elegant dome. The ancient church and half of the barony of Westerkirk were given in 1321 by Robert I. to the monks of Melrose; and the church thence till the Reformation was a vicarage. A chapel subordinate to the church, and dedicated to St Martin, stood at Boykin, and was in 1391 endowed with some lands by Adam de Glendonyng or Glendinning of Hawick. Another chapel subordinate to the church stood at Watcarrick, now in Eskdalemuir. In 1703 the upper part of Westerkirk was erected into the separate parish of Eskdalemuir, whilst part of Staplegorton was annexed to Westerkirk, the other part being added to Langholm. The public school, with accommodation for 106 children, had (1884) an average attendance of 48, and a grant of £54, 19s. Valuation (1860) £5802, (1885) £8132, 0s. 5d. Pop. (1801) 638, (1831) 642, (1861) 537, (1871) 540, (1881) 478.—*Ord. Sur.*, shs. 10, 16, 1864.

Wester, Loch of. See WICK.

Westerton, a mansion in Logie parish, Stirlingshire, in the northern vicinity of Bridge of Allan. Its late owner, Gen. Sir Jas. Edw. Alexander, C.B., F.R.S.E. (1803-85), held 181 acres in the shire, valued at £1102 per annum.—*Ord. Sur.*, sh. 39, 1869.

Westertown House, a modern castellated two-story mansion, with wings and a massive square central tower, in Elgin parish, near the right bank of the Black Burn, 7 miles SW of Elgin town. It belongs to the Earl of Fife.—*Ord. Sur.*, sh. 85, 1876.

Westfield, a village in Clackmannan parish, 2½ miles ESE of Alloa.

Westfield, a village in Rattray parish, Perthshire, on the left bank of the Ericht, 2 miles N of Blairgowrie, under which it has a post office.

Westfield, a North British station between Bathgate and Blackston Junction.

Westfield, a plain two-story mansion in Spynie parish, Elginshire, 3½ miles WNW of Elgin.

West Hall, an ancient mansion, with modern additions, in Oyne parish, Aberdeenshire, 1½ mile ENE of Oyne station, and 3¾ miles ESE of Insch. Long a seat of the Horns, and then of the Dalrymple-Horn-Elphinstones, it now belongs to Lady Leith.—*Ord. Sur.*, sh. 76, 1874.

Westhaven. See NEWTON OF PANBRIDE.

Westquarter, a village in Glassford parish, Lanarkshire, 2 miles NE of Strathaven. Westquarter House is the seat of Jn. Miller Wilson Jackson, Esq. of Hallhill (b. 1861; suc. 1865), who holds 563 acres in the shire, valued at £434 per annum.—*Ord. Sur.*, sh. 23, 1865.

Westraw House. See PETTINAIN.

Westray, an island at the NW extremity of the North Isles of Orkney. It lies 10½ miles NNE of Costa Head, the nearest point of Pomona; and 4 NNE of the nearest point of Rousay, from which it is separated by Westray Firth. Within 2 miles of its E and SE coasts lie Papa-Westray, Eday, Pharay, and Pharay Holm. Its length, from NW to SE, is 10⅛ miles; and its breadth varies between ½ mile and 6¼ miles. The only safe harbour is that of Pierowall, on the E coast, nearly opposite the S end of Papa-Westray. The chief headlands are Noup Head on the NW, Aiker Ness on the N, Spo Ness on the E, Weather Ness on the SE, Rap Ness on the S, and Berst Ness on the SW. The coast is, in general, rocky; and, over part of the W, consists of magnificent precipices, frequented by vast flocks of sea-fowl. A ridge of hills extends along the W of the broader part of the island, and attains 343 feet at Couters Hill, 369 at Knucker Hill, 355 at Gallo Hill, 556 at Fitly Hill, and 256 at Skea Hill; but the rest of the surface is pretty level. The soil of the arable lands, which probably do not amount to one-fifth of the area, is variably pure sand, a mixture of sand and clay, a black mossy mould, a rich loamy black mould, and a mixture of black mould and sand. At the head of the Bay of Pierowall is a village of the same name with an inn. In a small cavern, called the 'Gentleman's Cave,' in the bluff rocky coast of Rap Ness, several Orkney Jacobites lay concealed for several months in 1746. They were eagerly but vainly searched for throughout Orkney by a party of royal troops; and, while in the cave, they depended for their daily food upon the precarious means of a single person's stealthy visits to their retreat. Their houses were destroyed by the baffled military; but afterwards, when the excitement occasioned by the rebellion passed away, these were replaced, at the expense of Government, by others of better structure. In several places along the shores are graves or tombs of a very ancient date; and in one place is a high monumental stone. NOLTLAND CASTLE, noticed separately, is the chief antiquity; and Brough is the principal mansion. The island was anciently divided into the parishes of East Westray, West Westray, and North Westray or Ladykirk; but all these, together with the island of Papa-Westray, now form only one parish.

The parish is in the presbytery of North Isles and the synod of Orkney; the living is worth £233. The parish church, in the centre of Westray island, was built in 1845, and contains upwards of 800 sittings. Other places of worship are Rap Ness chapel of ease, Papa-Westray Free church, Westray Free church station, Westray U.P. church (1823; 440 sittings), and Westray Baptist chapel (1807; 450 sittings). Four public schools—East Side, Papa-Westray, Pierowall, and West Side—with respective accommodation for 90, 80, 180, and 94 children, had (1884) an average attendance of 80, 44, 149, and 77, and grants of £70, 11s., £50, 2s., £101, 1s., and £57, 0s. 6d. Valuation of parish (1860) £2808, (1884) £5406. Pop. of Westray island (1831) 1702, (1861) 2151, (1871) 2090, (1881) 2200; of parish (1801) 1624, (1831) 2032, (1861) 2545, (1871) 2460, (1881) 2545.

Westruther, a village and a parish of Berwickshire. The village stands 705 feet above sea-level, 5½ miles N by W of Gordon station, 6½ WNW of Greenlaw, and 7½ ENE of Lauder, under which it has a post office.

The parish, containing also Houndslow village, 1⅞ mile S by W, formed part of Hume till the Reformation, and then of Gordon till 1647. It is bounded N and NE

by the detached section of Cranshaws, E by Greenlaw, SE by Gordon, SW by Legerwood, and W and NW by Lauder. Its utmost length, from N to S, is 6¼ miles; its utmost breadth, from E to W, is 5 miles; and its area is 22¾ square miles or 14,643¾ acres, of which 13¾ are water. Eden Water flows 2 miles east-north-eastward along the Gordon boundary; Blackadder Water, formed by several head-streams that rise in the N of the parish, winds 2⅛ miles south-south-eastward along the Greenlaw boundary; and Boondreigh or Brunta Burn runs 5⅛ miles south-south-westward along or close to nearly all the Lauder boundary. Lying debatably between the Lammermuir and Lauderdale districts of Berwickshire, the surface sinks in the SE to 590 feet above sea-level, and rises thence to 785 feet near Hyndberry, 856 near Wedderlie, 1242 at Flass Hill, 1255 at Raecleugh Hill, and 1466 at Twinlaw Cairns near the northern border—bleak, cheerless uplands these last, but commanding brilliant and extensive prospects of the Merse and Teviotdale. Greywacke, often passing into greywacke slate, is the predominant rock in the N, red sandstone in the S. The latter has been largely worked for building material; and slate was quarried at Bruntaburn about the beginning of the present century. The soil of the arable lands varies much both in depth and in quality, and comprises clay, loam, gravel, and moorish mould, being mostly light and incumbent on a rocky or gravelly subsoil. Nearly 1000 acres are under wood; about 180 are in a state of moss; and the rest is either arable or pastoral. Antiquities, other than those noticed under Evelaw and Gibb's Cross, are the huge Twinlaw Cairns, faint vestiges of two camps on Raecleugh farm and Harelaw Muir, and sites or remains of three pre-Reformation chapels and several peel-towers. The two cairns are said to commemorate the death, by each other's hands, of the twin-brothers Edgar, who, ignorant of their kinship, resolved to settle by single combat the battle impending between the Scots and the Saxon invaders. A ballad, entitled the *Battle of Twinlaw*, the worst perhaps that was ever composed, is quoted in the *New Statistical Account* (1834) as having 'been known here for at least a century and a half.' John Veitch, the brother of that William Veitch, whose Life was written by M'Crie, and himself a preacher of great eminence, was a heritor in Westruther, and its first minister. He died in 1703. Estates, noticed separately, are Spottiswoode, Bassendean, and Wedderlie; and the first includes more than the half of the parish, 5 lesser ones having a value of from £350 to £1350 per annum. Westruther is in the presbytery of Earlston and the synod of Merse and Teviotdale; the living is worth £158, 6s. 8d. The parish church, built in 1840, contains 380 sittings. A Free church contains 270 sittings; and the public school, with accommodation for 128 children, had (1884) an average attendance of 66, and a grant of £51, 12s. Valuation (1865) £7212, 16s. 11d., (1885) £8761, 7s. 8d. Pop. (1801) 779, (1831) 830, (1861) 786, (1871) 784, (1881) 671.—*Ord. Sur.*, sh. 25, 1865.

West Water, a troutful stream of Lethnot, Edzell, and Stracathro parishes, Forfarshire, rising at an altitude of 2680 feet on the N side of Ben Tirran, and winding 23 miles east-south-eastward, till, after a descent of 2560 feet, it falls into the North Esk near Stracathro House.—*Ord. Sur.*, shs. 65, 66, 57, 1868-71.

Weydale, a place, with a post office and a public school, in Thurso parish, Caithness, 3½ miles SSE of the town.

Whale Firth, a sea-inlet on the W coast of Yell island, Shetland, striking 4⅜ miles west-south-westward, and having an average breadth of only ¼ mile.

Whalsey, an island of Nesting parish, Shetland, 1¾ mile E of the nearest point of the Mainland, and 13½ miles NNE of Lerwick, under which it has a post office. With a rocky coast, it measures 5⅝ miles from NE to SW, has a maximum breadth of 2½ miles, consists almost entirely of gneiss, is studded with ten little fresh-water lochs, rises to 393 feet at the Ward of Clett, contains one sheep farm, and has a free light soil, capable of considerable cultivation, but in many places severely 'scalped.' Symbister House, a stately mansion of Aberdeenshire granite, built half a century since at a cost of £20,000, is the property of William Arthur Bruce, Esq. (b. 1863; suc. 1873), who holds 25,180 acres, valued at £2354 per annum. The Established church was raised to *quoad sacra* status in 1869, its minister's stipend being £135, and the parish including the Out Skerries, etc.; and there are public schools of Brough and Livister. Pop. of island (1841) 628, (1861) 728, (1871) 854, (1881) 870; of *q. s.* parish (1881) 1027.

Whauphill, a railway station, with a post and telegraph office, in Kirkinner parish, Wigtownshire, 3¾ miles S by W of Wigtown.

Whiffiet. See Coatbridge.

Whim House, a plain three-story mansion in Newlands parish, N Peeblesshire, 7 furlongs NNE of Lamancha station, and 5 miles S by W of Penicuik. It was built by the third Duke of Argyll, and, two years after his death in 1761, was purchased and enlarged by James Montgomery, afterwards Lord Chief Baron of Exchequer, who made it his country residence. See Stobo.—*Ord. Sur.*, sh. 24, 1860.

Whinneyleggat, a place, with a post office and a public school, in Kirkcudbright parish, 3 miles NE of the town.

Whinyeon, Loch. See Twynholm.

Whistlefield, an inn near the E shore of Lock Eck, Argyllshire, 7 miles SSE of Strachur.

Whistlefield, an inn in Row parish, Dumbartonshire, 1¼ mile N by W of Garelochhead. It commands a striking view of Loch Long and the Gare Loch.

Whitadder Water, a stream whose source is in East Lothian, but most of whose course is in Berwickshire. It rises, at an altitude of 1100 feet, near the middle of the hilly parish of Whittinghame, close on the watershed or summit-range of the broad-based Lammermuirs; and has a course of 6¼ miles, chiefly south-south-eastward, and partly eastward to St Agnes, where it receives Bothwell Water on its left bank, and enters Berwickshire. During this brief connection with Haddingtonshire, it is a cold, moorland streamlet, and flows partly through Whittinghame, and partly between that parish and Berwickshire on its right bank, and a detached section of Stenton on its left. After entering Berwickshire it achieves a distance of 12 miles in five bold sweeps in very various and even opposite directions; and it then runs prevailingly eastward, over a distance of 15 miles, to the Tweed at a point 2½ miles above Berwick. Its principal tributaries are Dye Water, which enters it on the right side near the middle of Longformacus, and the Blackadder, which enters it at the village of Allanton in Edrom. Its entire length of course is nearly 34 miles. From the point of its debouching into the Merse, or over about four-fifths of its course, in Berwickshire, it is a stream of much gentle beauty. It traverses a country which is cultivated like a garden; it is overlooked and highly adorned at frequent intervals by fine mansions and parks; it runs almost constantly in the curving, the ever-sinuous line of beauty; it very generally has a deeply excavated path through earth or soft rock, so as to form a lowland dell, a gigantic and sometimes precipitous furrow, tufted up the sides with wood; and, though prevailingly destitute of decided picturesqueness or romance, it has a fair aggregate amount of landscape. It achieves little of its fall in races and none in leaps, but is nearly everywhere a rapid stream, brisk and cheery in its movement. In Berwickshire it bounds or traverses the parishes of Cranshaws, Longformacus, Abbey St Bathans, Duns, Bunkle, Edrom, Chirnside, Foulden, and Hutton. Like most of the streams which descend from either side of the Lammermuirs, it is subject to sudden freshets; and it rises in ordinary maximum about 9 feet above its usual level, and, in extraordinary or rare floods, as high as 15 feet. It is still an excellent trouting-stream, though not what it was in former years.—*Ord. Sur.*, shs. 33, 34, 26, 1863-64. See Sir Thomas Dick Lauder's *Scottish Rivers* (Edinb. 1874).

Whitburgh, a mansion of 1811 in Humbie parish, Haddingtonshire, 2½ miles ESE of Ford.

Whitburn, a village and a parish of SW Linlithgowshire. The village stands, 620 feet above sea-level, near the northern verge of the parish, 3¾ miles SSW of Bathgate, 9 furlongs W by S of Whitburn station on the Morningside section of the North British, and 3⅛ miles N by W of Breich station on the Caledonian, this being 21⅜ miles WSW of Edinburgh and 27¾ E by S of Glasgow. A burgh under the General Police and Improvement Act of 1862, it presents a well-built regular appearance, and has a post office, with money order, savings' bank, and telegraph departments, a branch of the Commercial Bank, gasworks, and a public library. Places of worship are the parish church, the Free church, and the U.P. church. The first was erected and partly endowed by public subscription in 1718, and was raised from a chapel of ease to parochial status in 1730. A strong Secession congregation early arose, in consequence of the parish church being subjected to the law of patronage, although the parishioners had subscribed for it on the condition of their having a vote; and here as elsewhere the Secession soon divided into Burghers and Anti-burghers. The first parish minister was the Rev. Alex. Wardrope, an eminent preacher, who took an active share in the 'Marrow Controversy.' Among his successors were William Porteous, D.D. (1735-1812), from 1760 to 1770, who planned the Glasgow Society of the Sons of the Clergy, and published several works; and the Rev. Mr Baron (1735-1803), from 1770 to 1779, author, and afterwards professor of moral philosophy at St Andrews. John Brown (1754-1832) was Burgher minister from 1777; and here was born his son, Professor John Brown, D.D. (1784-1858), the well-known Biblical expositor. Professor Archibald Bruce (1746-1816) was Anti-burgher minister from 1768 till 1806. He was author of *Free Thoughts on the Toleration of Popery*, and many other works, and at Whitburn received a visit about 1783 from Lord George Gordon. Pop. of village (1841) 798, (1861) 1362, (1871) 1432, (1881) 1200, of whom 620 were males. Houses (1881) 279 inhabited, 22 vacant, 3 building.

The parish, containing also the town of Fauldhouse, the villages of Longridge and East Benhar, with part of Blackburn, and the stations of Bents, Crofthead, and Fauldhouse, was disjoined from Livingston in 1730, but has formed a separate preaching station so early as 1628. It is bounded N by Bathgate and Livingston, E by Livingston, SE by West Calder in Edinburghshire, and W and NW by Shotts in Lanarkshire. Its utmost length, from E by N to W by S, is 6⅛ miles; its breadth increases westward to 3⅞ miles; and its area is 15⅛ square miles or 9807⅜ acres, of which 33¼ are water. The river Almond, coming in from Shotts, flows 7½ miles east-by-northward—for 2¾ miles across the north-western, and for 1 mile (near Whitburn station) across the northern interior, elsewhere along the northern boundary. How or Blairmuchole Burn flows 2⅝ miles east-north-eastward along all the north-western and part of the northern boundary to the Almond, another of whose affluents, Breich Water, flows 5½ miles east-north-eastward along all the Midlothian border; whilst the interior is drained by Cultrig or White Burn, Latch Burn, Bickerton Burn, and other rivulets. Along the Almond the surface declines to 500 feet above sea-level; and thence it rises to 695 near Bents station, 785 near Turnhigh, 852 near Benhar Colliery, and 951 near Fauldhousehills. It thus presents no conspicuous eminence; but much of the western district is high, bleak, mossy upland—Polkemmet and Faulhouse Moors. The rest of the parish is comparatively low and level, has mostly been worked into a state of high cultivation, and exhibits a fair degree of artificial embellishment. Trap rock, occurring in veins, bed-like masses, and isolated protrusions, forms numerous small knolls, and caps some of the higher grounds. The other rocks belong to the Carboniferous formation, and possessing great economical value, are so extensively and variously worked as to give a distinctive character to the industry of a large proportion of the population. Sandstone of several qualities is largely quarried; coal, in thick seams, has been worked since the early part of last century; and black-band ironstone, which yields from 27 to 33 per cent. of pig-iron, and which began to be mined about the year 1835, has since been worked with such increasing vigour as to occasion a large tract in the south-west to pass from a state of bleak solitude to one of busy industry and thronging population. The soil in some parts is a mixture of earth and moss, incumbent on strong clay or till; and in others is so stiff a clay as to derive little benefit from draining, but generally is a clayey loam, which well repays the labour of the husbandmen. Donald Cargill is said to have preached at Whitburn, on the Sabbath before his excommunication of Charles II. in the Torwood, Sept. 1680. A bog at Cowhill has yielded two Roman coins. Polkemmet, noticed separately, is the principal mansion; and 8 proprietors hold each an annual value of more than £500. In the presbytery of Linlithgow and the synod of Lothian and Tweeddale, this parish, since 1872, has been ecclesiastically divided in Whitburn and Faulhouse, the former a living worth £300. Six schools, with total accommodation for 1365 children, had (1884) an average attendance of 971, and grants amounting to £860, 19s. 7d. Valuation (1860) £9546, (1885) £17,415, 3s. 9d., *plus* £6421 for railways. Pop. (1801) 1537, (1831) 2075, (1861) 5511, (1871) 6911, (1881) 6326, of whom 2393 were in Whitburn ecclesiastical parish.—*Ord. Sur.*, sh. 31, 1867.

Whitebridge, a post office under Inverness, on the left bank of the Foyers, 10 miles NE of Fort Augustus.

Whitecairns, a place in Belhelvie parish, Aberdeenshire, 3 miles SE of New Machar station. It has an inn and a post office under Aberdeen.

White Cart. See Cart.

White Coomb. See Skene, Loch.

White Esk. See Esk.

Whitehaugh, an old mansion, enlarged by two wings in 1838, in Tullynessle and Forbes parish, Aberdeenshire, near the left bank of the Don, 4½ miles NE of Alford. Its owner, the Rev. Wm. Forbes-Leith, M.A. (b. 1833; suc. 1875), holds 3864 acres in the shire, valued at £2853 per annum.—*Ord. Sur.*, sh. 76, 1874.

Whitehill, a large Jacobean mansion in Carrington parish, Edinburghshire, near the right bank of Dalhousie Burn, 1 mile SSE of Hawthornden station. Built in 1844 from designs by W. Burn, it is the seat of Rt. Geo. Wardlaw-Ramsay, Esq. (b. 1852; suc. 1882).—*Ord. Sur.*, sh. 57, 1857. See Tillicoultry and Jn. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Whitehill. See Deer, New.

Whitehills, a fishing village in Boyndie parish, Banffshire, 3 miles WNW of Banff, under which it has a post office. Pop. (1871) 823, (1881) 920.—*Ord. Sur.*, sh. 96, 1876.

Whitehouse. See Tough.

Whitehouse, a post office in Kilcalmonell parish, Argyllshire, on the SE shore of West Loch Tarbert, 6 miles SSW of Tarbert.

Whitekirk and Tyninghame, a coast parish of NE Haddingtonshire, whose church stands 4¼ miles SE of North Berwick, 7⅛ WNW of Dunbar, and 4 N by E of the post-town, Prestonkirk (East Linton). Comprising the ancient parishes of Tyninghame, Aldham, and Hamer or Whitekirk, it is bounded NW by North Berwick, NE by the German Ocean, SE by Tyninghame Bay and Dunbar, and SW and W by Prestonkirk. Its utmost length, from NNW to SSE, is 5 miles; its utmost breadth is 4¼ miles; and its area is 7153½ acres, of which 822¼ are foreshore and 43½ water. The river Tyne, entering from Prestonkirk, first goes 2⅛ miles north-eastward across the southern district, and then meanders 2⅝ miles north-north-eastward through Tyninghame Bay to its mouth in the German Ocean; whilst the East Peffer Burn, after tracing 4½ furlongs of the Prestonkirk boundary, flows 3 miles north-eastward through the northern interior, and falls into the sea at a point 1⅝ mile NW of Tyne Mouth. The coast, from the mouth of the Tyne

to that of the Peffer, is a sandy tract, diversified only by the small headland of Whitberry and Ravensheugh Craig; but from the mouth of the Peffer to the boundary with North Berwick, it is a series of rocky ledges and rugged cliffs, rising in some places to a height of 100 feet. Whitekirk Hill (182 feet) on the north-western border, and Lawhead (100) 1¾ mile to the SSE, are the highest ground in the interior, and command an exquisite prospect over the Lothians, the German Ocean, the Firth of Forth, and the coast of Fife. A belt of flat rich haugh extends S of Lawhead from nearly the western boundary to the coast; the rest of the surface either declines slowly through Whitekirk Hill and Lawhead, and is otherwise so gently featured as to possess all the softness, without any of the monotony, of a luxuriant plain. The entire parish, as seen from Lawhead, exhibits surpassing opulence of natural beauty and artificial embellishment. The rocks are partly eruptive, but chiefly red sandstone, red clay, ironstone, and red and green slaty clays. The soil, on the haugh lands, is alluvium; on the gentle slopes adjacent to the haughs is mostly a dark-coloured loam; and on the highest grounds, is thin and shallow but good. About two-thirds of the entire area are in tillage; and the other third, with slight exception, is either in grass or under wood. The trees on the Tyninghame estate are especially fine, and cover a very large area; but thousands of them were felled by the tremendous gale of 14 Oct. 1881. Of the three ancient churches of Tyninghame, Aldham, and Hamer, the two first have been noticed separately. Hamer, or 'the greater ham,' in contradistinction to Aldham, or 'Auld-ham,' took its present name of Whitekirk from the whiteness of its kirk. The parish forms the central part of the united district, and lay, of course, between Aldham and Tyninghame. The church, whose interior was beautifully restored in 1885, was dedicated to the Virgin Mary, and from the 12th century till the Reformation belonged to the monks of Holyrood. It early became a resort of pilgrims; and on pretext of a pilgrimage to it, with the alleged purpose of performing a vow for the safety of her son, the dowager-queen of James I. outwitted Chancellor Crichton, and carried off James II. in a chest to Stirling (1438). Prior to this, in 1356, when Edward III. invaded East Lothian, some sailors of his fleet entered the church. One of them rudely plucking a ring from the Virgin's image, a crucifix fell from above, and dashed out his brains; and the ship, we are told, which was stored with the spoils of this and of other shrines, was wrecked off Tynemouth by a vehement storm. It was probably on this account that the famous Æneas Silvius, known to history as Pope Pius II., made a pilgrimage hither, just eighty years later, on landing in Scotland after a perilous voyage. He walked ten miles barefoot over the frozen ground, and caught thereby a chronic rheumatism, which lasted to the end of his days. The present church, which certainly dates from pre-Reformation times, has a square tower; and in the churchyard is a large stone slab, removed from the chancel some years ago in the course of repairing, and bearing the life-size effigy of an ecclesiastic. Behind the church is—what is rare in Scotland—the ancient barn in which the monks stored their grain, and which is absurdly affirmed to have given a two-nights' lodging to Queen Mary. Aldham was united to Whitekirk in the 17th century, and Tyninghame in 1761. At Seacliff, overlooking the sea, stood a chapel, whose ruins are still extant. Mansions, separately described, are Newbyth, Seacliff, and Tyninghame. This parish is in the presbytery of Dunbar and the synod of Lothian and Tweeddale; the living is worth £410. Two public schools, Tyninghame and Whitekirk, with respective accommodation for 122 and 100 children, had (1884) an average attendance of 82 and 54, and grants of £70 and £43, 8s. Valuation (1860) £11,084, (1885) £11,705, 1s. Pop. (1801) 925, (1841) 1170, (1861) 1113, (1871) 1073, (1881) 1051.—*Ord. Sur.*, shs. 33, 41, 1863-57.

Whiteknow, an estate, with a mansion, in Hutton parish, Dumfriesshire.

Whitemire, a village in Dyke parish, Elginshire, 3¾ miles S of Brodie station.

Whiteness. See Tingwall.

Whiten Head (Gael. *Ceana Geal Mor*), a towering white headland on the N coast of Sutherland, in Durness and Tongue parishes, between Loch Eriboll and Tongue Bay. Rising steeply from the sea to heights of 603 and 935 feet, it ascends inland to Ben Hutig (1340); and its base has been hollowed out by the waves into a multitude of remarkable caverns.—*Ord. Sur.*, sh. 114, 1880.

Whiterashes, a place with a post office under Aberdeen, a public school, and an Episcopal church (1850), near the mutual border of New Machar and Udny parishes, Aberdeenshire, 3¼ miles NW of New Machar station.

Whiterigg, a railway station in New Monkland parish, Lanarkshire, 2¾ miles NE of Airdrie, under which there is a post office.

Whithorn, a town and a parish of SE Wigtownshire. A royal, parliamentary, and police burgh, the town stands nearly in the centre of the parish, 2 miles inland, and 220 feet above sea-level. By road it is 3¼ miles NW of Isle of Whithorn, 32 ESE of Stranraer, and 11 S by E of Wigtown; and its station, the terminus of the Wigtownshire railway (1875-77), is 12¼ miles from the county town. The main street, extending 5¼ furlongs north-by-eastward, is narrow at the foot or northern extremity, but very broad towards the middle, where a rivulet—now covered over—crosses it, and where it sends off two transverse streets—the Pend, leading to the parish church, and the Free Church (or Rotten) Row. At the upper end it narrows again into the 'Port Mouth,' and then forks into Glasserton Row and Isle Row, running W and SE respectively. Great improvements have been effected since the beginning of the present century. The old thatched hovels have made way for good slated houses; the 'wee dunghills at every door' are departed; and the streets are no longer grass-grown. There are a post office, with money order, savings' bank, and telegraph departments, branches of the Clydesdale and National Banks, 17 insurance agencies, 2 hotels, a gas company, a town-hall (1814), a bowling green, and a cattle market on the Thursday after the first Friday of every month except January, February, and March. The plain parish church, built in 1822, contains 800 sittings, and has a later square tower; the Free church was built soon after the Disruption. Other places of worship are a U.P. church, a Reformed Presbyterian church, and the Roman Catholic iron church of SS. Ninian, Martin, and John (1882; 120

Seal of Whithorn.

sittings). The burgh is governed by a provost, 2 bailies, a treasurer, a town clerk, and 5 councillors; and prior to the Redistribution Act of 1885 it united with Wigtown, New Galloway, and Stranraer in returning a member to parliament. As a royal burgh, it claims

to have got its earliest charter from Robert Bruce; and it rests its appeal on a confirmatory charter granted by James IV. in 1511. Corporation revenue (1833) £153, 8s., (1840) £230, 11s., (1874) £228, (1884) £80. Municipal constituency (1885) 253. Valuation (1866) £2779, (1885) £3817, *plus* £150 for railway. Pop. (1831) 1305, (1851) 1652, (1861) 1623, (1871) 1577, (1881) 1653, of whom 904 were females, and 1643 were in the royal burgh. Houses (1885) 308 inhabited.

Whithorn is mentioned by Ptolemy, the Alexandrian geographer, in the first half of the second century, A.D., as 'Leukopibia,' a town of the Novantæ. *Leukopibia* is probably a corruption of the Greek *Leuk' oikidia*, and so synonymous with the Latin *Candida Casa*, and the old English *Hwit-aern*—all of them signifying the 'White house.' It thus is a place of hoar antiquity, and moreover is memorable as the home—perhaps, too, the birthplace—of St Ninian, the first known apostle of Scotland. The 'St Ringan' of Lowland Scotch, he was born of royal parentage on the shores of the Solway Firth about the middle of the 4th century. Of studious and ascetic habits, he was fired by the Holy Spirit to make a pilgrimage to Rome, which he reached by way of the Gallican Alps, and where he was consecrated bishop by the Supreme Pontiff. On his homeward journey he paid a visit to St Martin at Tours, and after his arrival in Scotland founded the 'Candida Casa,' or church of Whithorn, dedicating it to St Martin, who had just died (397). Later, he laboured successfully for the evangelisation of the Southern Picts, and in 432 (according to the Bollandists) died, 'perfect in life and full of years,' and was buried in his cathedral church at Whithorn. His festival falls on 16 Sept. Though the facts of his life, as well as independent testimonies, show that Christianity existed in Scotland prior to St Ninian, yet his apostolate is the first distinct fact in the history of the Scottish Church. Even of Ninian himself we can gather little that is definite from the Latin life by St Ailred (b. 1109; d. 1166), which, while good in style, is almost worthless as an historical record. (See Bishop]Forbes' 'Life of St Ninian' in vol. v. of *The Historians of Scotland*, Edinb. 1874.) Under the name of the 'great monastery of Rosnat,' St Ninian's church became known as a great seminary of religious and secular instruction; and to Cairnech, one of its bishops and abbots, is ascribed the introduction of monachism to Ireland. A bishopric of Whithorn was founded by the Angles in 727, but came to an end about 796, the see having been filled by five bishops; nor was it till the reign of David I. (1124-53) that Fergus, lord of Galloway, re-established the see of Galloway, and founded here a Premonstratensian priory, whose church became the cathedral, and contained the shrine of St Ninian.

This bishopric comprehended the whole of Wigtownshire, and by far the greater part of Kirkcudbrightshire, or all of it lying W of the river Urr; and it was divided into the three deaneries of the Rhinns, Farines, and Desnes, lying westward respectively of Luce Bay, of the Cree, and of the Urr, and corresponding proximately, though not quite, to the limits of the respective existing presbyteries of Stranraer, Wigtown, and Kirkcudbright. Gilla Aldan, the first bishop, was consecrated by the Archbishop of York; and his successors looked to that archprelate as their proper metropolitan till at least the 14th century. The bishops of Galloway afterwards, like all their Scottish brethren, became suffragans of St Andrews; but on the erection of Glasgow, in 1491, into an archbishopric, they, along with the bishops of Argyll, Dunkeld, and Dunblane, passed under the surveillance of that arch see, and on account of their being the chief suffragans, they were appointed vicars-general of it during vacancies. The canons of Whithorn priory formed the chapter of the see of Galloway, their prior ranking next to the bishop; but they appear to have been sometimes thwarted in their elections, and counterworked in their power, by the secular clergy and the people of the country. The revenues of the bishopric, which had previously been small, in the beginning of the 16th century, were greatly augmented by the annexation to them of the deanery of the chapel-royal of Stirling, and some years later, by that of the abbey of Tongland. In a rental of the bishopric, reported in 1566 to Sir William Murray, the Queen's comptroller, the annual value, including both the temporality and the spirituality, was stated to be £1357, 4s. 2d. Though the revenues were in a great measure dispersed between the date of the Reformation and that of James VI.'s revival of Episcopacy, and though they again suffered diminution in 1619 by the disseverment of the deanery of the chapel-royal; yet they were augmented in 1606 by the annexation of the priory of Whithorn, and afterwards by that of the abbey of Glenluce; and, in 1637, by the accession of the patronage and tithes of five parishes in Dumfriesshire, which had belonged to the monks of Kelso. At the Revolution, the net rental amounted to £5634, 15s. Scots; and exceeded that of any other see in Scotland, except the archbishoprics of St Andrews and Glasgow.

Excepting that of Maurice, who swore fealty to Edward I. in 1296, the names of none of the early priors of Whithorn have survived. James Beaton, who was prior in 1503, and uncle of Cardinal Beaton, acted a conspicuous, and, in some particulars, an inglorious part in the history of his country, and rose to the highest offices in both Church and State—becoming successively, in the one, bishop of Galloway, archbishop of Glasgow, and archbishop of St Andrews; and in the other, Lord Treasurer and Lord Chancellor of the kingdom. Gavin Dunbar, the next prior of Whithorn, was tutor to James V., and rose to be archbishop of Glasgow, Lord Chancellor of the kingdom, and, during one period of the King's absence in France, one of the Lords of the Regency. At the Reformation the rental of the priory, as reported to Government, amounted to £1016, 3s. 4d. Scots, besides upwards of 15 chalders of bere and 51 chalders of meal. The property, as we have seen, was given by James VI. to the bishops of Galloway, and it afterwards followed the same fates as that of the parish church of Whithorn.

Pilgrimages, at all times and by all classes of persons, were made from every part of Scotland to the shrine of St Ninian at Whithorn. In 1425 James I. granted a protection to all strangers coming into Scotland as pilgrims to the shrine; and in 1506 the Regent Albany granted a general safe-conduct to all pilgrims hither from England, Ireland, and the Isle of Man. Many of the most distinguished personages of the kingdom, including kings, queens, and the highest nobles, visited Whithorn on pilgrimage. In 1473, Margaret, the queen of James III., made a pilgrimage hither, accompanied by six ladies of her chamber, who were furnished on the nonce with new livery gowns. Among other charges in the treasurer's account, for articles preparatory to her journey, are 8 shillings for 'panzell crelis,' or panniers, 10 shillings for 'a pair of Bulgis,' and 12 shillings for 'a cover to the queen's cop.' James IV. made pilgrimages to Whithorn, generally once and frequently twice a year, through the whole period of his reign. He appears to have been accompanied by his minstrels and a numerous retinue; he gave donations to priests, to minstrels, and to pilgrims, and, through his almoner, to the poor; and, in his journey both hither and back, he, in addition, made offerings at various churches on his way. In 1507, after his queen had recovered from a menacing illness, he and she made a joint pilgrimage, and occupied 31 days from leaving Stirling till they returned. They were accompanied by a large retinue, and progressed in a style of regal pomp. In 1513, the old Earl of Angus, 'Bell-the-Cat,' retired to the priory, where he died in the following year. In 1532 and 1533 James V. appears from the treasurer's accounts to have made several pilgrimages. So popular, in fact, was the practice of travelling to the shrine of St Ninian in quest of both physical and spiritual good, that, for all that the preachers could preach or Sir David Lyndsay could write, it continued for some time after the Reformation, and was not effectually put down till an act of parliament, passed in 1581, rendered it illegal. The ruinous,

roofless cathedral, now overgrown with ivy, and measuring 74 by 24 feet, is in the Romanesque, First Pointed, and Second Pointed styles of architecture, and exhibits some sculptured armorial bearings. It has lost the fine SW steeple, which was standing when Symson wrote in 1680; and the chief vestige of its former magnificence is a beautiful round-headed archway, with remains of vaults and other buildings in connection with the ancient priory. A good specimen of a Runic stone and several other ancient stones have been lately set up within the old church; and on the road to Isle of Whithorn, ¼ mile S of the burgh, stands a greywacke pillar, 3⅛ feet high, with an encircled cross sculptured on it, and a mutilated Latin inscription, in which only the words, 'of Peter the Apostle,' are now clearly decipherable. It probably marked the site of a pre-Reformation chapel.

The parish of Whithorn is bounded N and NE by Sorbie, E and S by the sea, and SW and W by Glasserton. Its utmost length, from N to S, is 7⅝ miles; its utmost breadth is 5⅛ miles; and its area is 12,061½ acres, of which 167¼ are foreshore and 3 water. The bold rocky coast, 7 miles in extent, rises rapidly in several places to over 100 feet above sea-level, and is pierced with some deep caves. (See BOROUGH HEAD.) The interior nowhere much exceeds 300 feet of altitude, but has the broken, knolly, tumulated aspect which characterises so much of Wigtownshire—an assemblage of hillocks and little hollows. Wood stretches out to some extent round the mansion of Castlewigg, and elsewhere a few plantations adorn the surface; but they are far from relieving the parish from a comparatively naked aspect. Yet much of the ground, which at a small distance seems barren or moorish, is carpeted with fertile soil, and produces excellent herbage or crops of grain. Excepting the summits and occasionally the sides of a considerable number of the knolls, and excepting the planted area and a small aggregate extent of little bogs, the entire parish is in tillage. Some of the bogs produce turf-fuel, and others contain beds of shell-marl. Copper has been found in some large pieces, and in a small disturbed vein; but competent opinion is against the likelihood of its existing in such quantity as to repay the cost of regular mining operations. The predominant rocks are transition or Silurian; and large granite boulders lie on some parts of the surface. Much of the soil is a vegetable mould, of great depth and high fertility. An ancient fortification, called Carghidoun, and enclosing about half an acre, crowns a precipice on the coast of the estate of Tonderghie; another, called Castle Feather, and enclosing nearly an acre, crowns another precipice some distance to the SE; a third, less traceable, but seemingly about the same size as the second, occurs on a cliff still further SE; and a fourth, whose vestiges lie dispersed over three crowns, surmounts the bold brow of Borough Head. All these look out to the Isle of Man, and probably were erected to defend the country from the descents of the Scandinavian vikings who possessed that island. Remains of a camp existed ¾ mile W by S of the town; and, though greatly defaced, are distinct enough to leave no doubt of its having been Roman. Mansions, noticed separately, are CASTLEWIGG and TONDERGHIE; and 6 proprietors hold each an annual value of £500 and upwards. Whithorn is in the presbytery of Wigtown and the synod of Galloway; the living is worth £350. Three public schools—Glasserton Road, Isle, and Principal—with respective accommodation for 200, 85, and 178 children, had (1885) an average attendance of 161, 50, and 131, and grants of £130, £32, 2s., and £115, 15s. 3d. Valuation (1860) £14,422, (1885) £15,553, 5s. 9d. Pop. (1801) 1904, (1831) 2415, (1861) 2934, (1871) 2906, (1881) 2929.—*Ord. Sur.*, shs. 2, 4, 1856-57.

Whithorn, Isle of. See ISLE OF WHITHORN.

Whiting Bay, a bay in the SE of Arran island, Buteshire, 4 miles SSE of Lamlash. It measures 3 miles across the entrance, but less than ¾ mile thence to its inmost recess; and it gives name to a Free church (1875), an hotel, a public school, and a post office, with money order, savings' bank, and telegraph departments.—*Ord. Sur.*, sh. 13, 1870.

Whitletts, a village in St Quivox parish, Ayrshire, 1¾ mile NE of Ayr, under which it has a post office. Pop. (1871) 505, (1881) 588.

Whitslaid, a ruined peel-tower of the Lauder family in Legerwood parish, Berwickshire, on the left bank of Leader Water, 3 miles SSE of Lauder town.

Whitsome, a post-office hamlet and a parish in the Merse district, SE Berwickshire. The hamlet, a decayed place, is 9 miles N by E of Coldstream, 8 ESE of Duns, and 4 S of the post-town, Chirnside. In July 1482 it was burnt by the English under the Duke of Gloucester, afterwards Richard III.

The parish, since 1735 comprehending the ancient parish of Hilton, is bounded W and N by Edrom, E by Hulton, SE by Ladybank, and SW by Swinton. Its utmost length, from E by N to S by W, is 4½ miles; its width varies between ¾ mile and 2⅝ miles; and its area is 4896¾ acres, of which 1½ is water. LEET WATER, rising near the northern border, flows 3 miles south-south-westward through the interior until it passes off into Swinton parish on its way to the Tweed at Coldstream. Bands of flat ground, at no point sinking much below 150 feet above sea-level, extend along the course of the stream and along the north-eastern and eastern borders; but over the rest of the area they give place to undulations of surface, whose highest ground attains 294 feet. The parish everywhere has the finely enclosed and richly cultivated aspect which so generally distinguishes the Merse. The predominant rock is New Red Sandstone, which, forming a bed about 40 feet thick immediately beneath the soil, has been largely quarried. Coal was bored for in 1824-25, but without success. The soil of much of the low grounds is a deep alluvium, abounding in vegetable remains. Nearly 200 acres are under wood; and almost all the remainder is in tillage. In the field of Battleknowes on Leetside farm was an ancient camp; many querns, stone coffins, and a bronze caldron have from time to time been discovered in various parts; the memory of the Knights-Templars' possessions at Myreside long survived in the names Temple-lands, Temple Hall, Temple Well; and down to the middle of last century the 'Birlie-Knowe' or primitive mote-hill of the village could be seen to the E of the present schoolhouse. The Rev. Henry Erskine (1624-96), whilst residing at Ravelaw after his ejection from Cornhill, frequently preached at Old Newton. Among his hearers was the youthful Thomas Boston (1676-1732), author of the *Fourfold State*, who himself once preached in Whitsome church to so eager a multitude, that many, who could not gain access, climbed to the roof and tore away part of the thatch, so as to hear and see him from above. The LAWS is the only mansion; but 6 proprietors hold each an annual value of more, and 5 of less, than £500. Whitsome is in the presbytery of Chirnside and the synod of Merse and Teviotdale; the living is worth £415. The present parish church, at the W end of the hamlet, was built in 1803, and contains 245 sittings. The public school, with accommodation for 151 children, had (1884) an average attendance of 84, and a grant of £77, 6s. Valuation (1865) £8976, 11s. 11d., (1885) £8228, 4s. Pop. (1801) 560, (1831) 664, (1861) 640, (1871) 608, (1881) 560.—*Ord. Sur.*, sh. 26, 1864.

Whittadder. See WHITADDER.

Whitten Head. See WHITEN HEAD.

Whittinghame, a parish of Haddingtonshire, whose church stands within 1½ mile of the northern border of the parish, 3 miles SSE of East Linton station, 6 E of Haddington, and 7½ WSW of Dunbar. At Luggateburn village, still nearer the N end of the parish, are the public school and a post office under Prestonkirk. The baronial courts of the Earls of March formerly had their seat in Whittinghame.

The parish, comprehending the ancient chapelries of Whittinghame and Penshiel, long subordinate to Dunbar, is bounded N by Prestonkirk and the main body of Stenton, E by the main body of Stenton, by Spott,

and by Stenton (detached), SE and S by Cranshaws and Longformacus in Berwickshire, and W by Garvald and Morham. Its utmost length, from NNW to SSE, is 11 miles; its breadth varies between 1⅛ mile and 5¼ miles; and its area is 15,595 acres. Whittinghame or the Papana Burn, formed by the confluence of two head-streams near Garvald church, runs 4⅞ miles north-north-eastward on its way to the sea at Belhaven—for 3 miles across the northern interior, and elsewhere along the western and northern boundaries. It winds here through a beautiful sylvan dell; and, at the point where it quits the parish, is joined by Souchet Water, running 2⅝ miles north-by-eastward along the eastern boundary. Whitadder Water, rising near the middle of the parish at an altitude of 1100 feet, runs 4⅞ miles south-south-eastward, for 2½ through the southern interior, and then along the boundary with the detached section of Stenton; and, together with Kingside, Kell, Faseny, and other tributary burns, drains all the southern portion of the parish. In the extreme NE the surface declines to 190, in the extreme SE to 700, feet above the sea; and chief elevations, from N to S, are Whitelaw Hill (584 feet), Clints Dod (1307), and Redstone Rig (1382). The northern district is gently undulating, and presents that richness of aspect which so eminently characterises the Haddingtonshire lowlands; the middle district, up to a line a little N of the source of Whitadder Water, rises slowly and gradually, with alternating elevations and depressions, and commands from its higher grounds a magnificent view of much of the Lothians, the Firth of Forth, the German Ocean, and the East Neuk of Fife; and the southern district consists entirely of a portion of the Lammermuir Hills. Greywacke and red sandstone are the predominant rocks, and the latter has been largely quarried. The soil of the arable lands on the left side of Whittinghame Water is generally of superior quality—some of it a deep rich loam, equal to the best in any other parts of the county; that of the arable lands on the right side of the stream is partly a poor clay, partly a good light loam, and mostly light and sandy. About 200 acres are under wood, and little more than one-fifth of the entire area is in tillage, nearly all the remainder being hill-pasture. The massive, square, battlemented keep of Whittinghame Castle, where the Earl of Morton and Bothwell are said to have plotted the murder of Darnley, beneath a yew tree (probably 600 years old, and now 11 feet in girth), is still in good repair, though showing marks of great antiquity. It stands on elevated ground overlooking Whittinghame Water, surrounded by many natural beauties, improved by the embellishments of art. Ruins of the baronial strongholds of Stoneypath and Penshiel still exist; and an oval camp, in a state of tolerable preservation, is on Priest's Law, one of the Lammermuir Hills. It is strongly and regularly fortified, having four ditches on the N side and three on each of the other sides, measuring about 2000 feet in circumference. A pre-Reformation chapel stood below Penshiel Tower, in a glen still called from it Chapelhaugh; and an ancient religious house has left some traces on the estate of Papple. Perhaps the most interesting antiquity is an ancient burying-ground, traceable only as a black mark in a field, where a few years ago 200 stone cists were accidentally turned up. The field is called Kirklands, and probably contained a kirk of the Celtic Church 1000 years ago. Whittinghame House, on the right bank of Whittinghame Water, 3¼ miles SSE of East Linton, is a large Grecian edifice of light-coloured sandstone, erected after the purchase of the estate by James Balfour, Esq., in 1817. It has a broad W terrace (1871), three magnificent approaches, fine views, and beautifully wooded grounds, which contain the castle and yew mentioned above. A blue gum from Australia, planted in 1846, is 53 feet high, and 8½ in girth at 1 foot from the ground. The present owner, Arthur James Balfour, Esq., M.P., LL.D. (b. 1848; suc. 1856), holds 10,564 acres in the shire, valued at £10,611 per annum (Jn. Small's *Castles and Mansions of the Lothians*, 1883).

Ruchlaw, a mansion of some antiquity, 3¾ miles SSW of East Linton, is the seat of Thomas Buchan Sydserff, Esq. (b. 1822; suc. 1839), owner of 2200 acres of £1701 value per annum. In all, 5 proprietors hold each an annual value of more, and 2 of less, than £500. Whittinghame is in the presbytery of Dunbar and the synod of Lothian and Tweeddale; the living consists of 21 chalders of grain, with a manse and glebe valued at £51. The parish church, near the village, was built in 1722, and, as greatly improved in 1822, and again (internally) in 1876, contains 260 sittings. The public school, with accommodation for 93 children, had (1884) an average attendance of 49, and a grant of £51, 0s. 6d. Valuation (1860) £7491, (1885) £8252, 4s. Pop. (1801) 658, (1831) 715, (1861) 710, (1871) 657, (1881) 639.—*Ord. Sur.*, sh. 33, 1863.

Whitton Tower. See Morebattle.

Wiay, an island (1¼ mile × 7 furl.; 190 feet high) of Bracadale parish, Isle of Skye, Inverness-shire, in Loch Bracadale. Pop. (1881) 4.

Wiay, an island (2¼ × 1¼ mile; 1·6 sq. mile) of South Uist parish, Outer Hebrides, Inverness-shire, off the SE coast of Benbecula. Pop. (1881) 5.

Wick (Scand. *vik*, 'a bay'), a large coast parish containing a royal burgh of the same name, and also a river in the NE of the county of Caithness. It is bounded N by the parishes of Bower and Canisbay, E by the outer Moray Firth, S by the parish of Latheron, and W by the parishes of Latheron, Watten, and Bower. The boundary line for 5½ miles along the N and W sides at the NW corner is formed by the Kirk Burn and its continuation the Burn of Lyth, and for ½ mile near the centre of the W side by Wick Water; elsewhere it is artificial, except along the sea coast, and at one or two points where, for short distances, it follows the courses of small burns. The extreme length of the parish, from the point on the N where the boundary reaches the sea ¼ mile N of Brough Head, S by W to the point where the boundary again reaches the sea at Bruan, is 15½ miles; the breadth varies from 2½ miles from E to W, across the centre of the Loch of Wester, to 7⅝ miles measuring straight W from the projecting land S of Staxigoe; and the area is 48,627·696 acres, of which 715·213 are water, 570·189 are foreshore, and 78·073 are tidal water. Following windings the length of the coast-line is about 27 miles, and includes in its northern portion the large sweep of Sinclair or Ackergill Bay, and near the centre Wick Bay, ⅞ mile wide in a straight line across the mouth, and ¾ mile deep from this line to the town of Wick. Immediately N of Wick Bay is the smaller bay of Broad Haven, and all along the coast from Noss Head—on the SE of Sinclair Bay—southward are a number of narrow creeks with steep rocky sides, and locally known as goes. The northern portion of the coast has a low sloping shore line, while round the greater part of Sinclair Bay there is a low sandy beach; but from the S side of this, round Noss Head and all the way southwards, there is a line of cliffs which are at many places very lofty and picturesque, rising at some points sheer from the sea to a height of over 200 feet. Close inshore, but detached, there are a number of stacks, one of which, called The Brough, 1½ mile S of Wick, is perforated by a long narrow cave which passes right through the mass of rock. Near the centre the roof of the cave has fallen in, so that an oval opening runs from the top to the sea below. A quarter of a mile N of The Brough is the Brig o' Trams—the name given to a narrow natural bridge of rock which connects an outlying stack with the mainland. There is another natural arch called the Needle E'e near Ires Goe, 1½ mile farther S, and near the South Head of Wick on the S side of the bay are several caves. The whole of the rock scenery is good, and on the S side of the South Head there is a heap of stones called the Grey Stones, which illustrate in a noteworthy manner the immense power of the waves on this exposed coast. 'To the S of the town of Wick,' says Dr Archibald Geikie, 'the waves have quarried out masses of Old Red Sandstone, and piled

them up in huge heaps on the top of the cliff, sixty or a hundred feet above high-water mark. Some of the blocks of stone, which have been moved from their original position at the base or on the ledges of the cliffs, are of great size. My friend, Mr C. W. Peach, has been so kind as to send me some notes regarding them. "The largest disturbed mass," he says, "contains more than 500 tons, and is known as Charlie's Stone. Others, varying in bulk from 100 to 5 tons or less, lie by hundreds piled up in all positions in high and long ridges, which, before the march of improvement began in the district, extended far into the field above the cliff. Near the old limekiln, South Head, similar large blocks of sandstone have been moved by the gales of the last three years [1862-64]." ' The caves already mentioned are generally inhabited by tinkers, an interesting description of whose ways as modern 'cave-dwellers' is given by Dr Arthur Mitchell in *The Past in the Present* (Edinb. 1880). The surface of the parish is gently undulating, and nowhere rises to any great height. In the division to the N of the valley of Wick Water the highest point is Hill of Quintfall (190 feet) in the NW; while S of the river no portion of the surface is less than 90 feet above sea-level; and towards the south-western border are Blingery Hill (340), Tannach Hill (457), Hill of Oliclett (462), Hill of Yarehouse or Yarrows (696)—which is the highest point—Whiteleen Hill (464), and Hill of Warehouse (513). Along the shore the highest point is Hill of Toftcarl (229 feet). About one-fourth of the parish, mostly near the coast and along the valley of Wick Water in the centre, is cultivated; but the rest of the surface is a bleak bare moorland, with extensive tracts of moss in the N and W of the northern district and in the centre and SW of the southern district. Across the centre of the northern section is a hollow occupied by Wester Water, Loch of Wester, and—extending along the NW corner—Burn of Lyth; another strath, occupied by the deep and extensive moss of Kilminster, stretches southward along the middle part of the western border; and a third strath, traversed by Wick Water, extends across the centre of the parish. The soil varies from light sand to good loam, but is mostly a stiff hard clay or peaty earth. The underlying rocks are flaggy beds belonging to the Old Red Sandstone, and are quarried for building purposes. Near the centre of the northern division is Loch of Wester ($\frac{7}{8} \times \frac{1}{4}$ mile), $2\frac{1}{2}$ miles SSW is Loch of Kilminster, and $1\frac{1}{8}$ mile farther SSW Loch of Winless (1 mile × 150 yards). In the southern division are Loch of Hempriggs, 2 miles S by W of the town of Wick; Loch of Yarehouse ($\frac{1}{2} \times \frac{1}{4}$ mile; 301 feet), 5 miles S by W of the town; Loch Sarclet ($\frac{1}{2} \times \frac{1}{8}$ mile; 130 feet), 5 miles S of the town; and the small Loch Watenan and Groats Loch, $6\frac{1}{2}$ miles S by W at Ulbster. The drainage is carried off in the N by Burn of Lyth flowing to, and Wester Water flowing from, Loch of Wester—the latter stream reaching the sea near the centre of Sinclair Bay—and by smaller streams flowing to these or direct to the loch; in the centre by Wick Water, in the W and SW of the southern division by the Achairn Burn, and in the NE of it by a burn carrying off the surplus water of Loch of Yarehouse and Loch of Hempriggs, both streams flowing to Wick Water. Loch Sarclet and Loch Watenan both drain direct to the sea. There is good fishing on the lochs and streams, but the trout are small. Wick Water has its principal source in Loch Watten (55 feet), and has thence a course of a little over 4 miles E by S to the sea, which it reaches at the head of Wick Bay. Immediately after leaving Loch Watten it receives from the S the stream formed by the joint waters of the Burn of Acharole from Loch of Toftingale and Strath Burn from the southern part of the parish of Watten; and farther down on the same side are the Achairn Burn and a burn from Hempriggs Loch. On the N side the principal tributary is a small stream from Loch of Winless. It is a sluggish stream, and though little over 30 feet in mean breadth it is subject to such heavy floods during rainy weather that it then lays a large part of its strath under water. The fishing is poor and the trout small. The principal antiquities are remains of Pictish towers at several places—a very well preserved one being on the shore of Loch of Yarehouse—and there are also cairns and traces of stone circles and weems. There are a number of ancient burial mounds along the margin of Sinclair Bay. On a headland $1\frac{1}{4}$ mile SSW of the town is the castle of Old Wick, known locally as 'The Auld Man of Wick.' It is a ruined square tower, and is of unknown antiquity; but it must be older than the 14th century, when it was the residence of Sir Reginald de Cheyne, the last of the male line of a once powerful Norman family who held large possessions in the N of Scotland. After his death it passed to the husband of his second daughter, Nicholas, second son of Kenneth, Earl of Sutherland, and was afterwards in the possession of the Oliphants, from whom it passed to Lord Duffus, and so to Dunbar of Hempriggs. Ackergill and Girnigoe and Sinclair Castles are separately noticed. There were a number of chapels in the district, one at Ulbster being dedicated to St Martin, one at Hauster to St Cuthbert, one at Head of Wick to St Ninian, one at Sibster to St Mary, one at Kirk of Moss to St Duthac; and St Tears, on the S shore of Sinclair Bay, was associated with the Holy Innocents. Curious observances connected with Innocents' Day and Christmas Day are noticed in the *New Statistical Account*. The Moor of Tannach was in 1464 the scene of a clan battle between the Gunns on the one hand and the Keiths of Ackergill and the Mackays of Strathnaver on the other; and Allt-na-marlach, to the W of the town, was in 1678 the scene of the defeat of the Sinclairs by Lord Glenorchy and a body of Highlanders he had mustered to enforce his claims to the earldom of Caithness. The parish is traversed for 6 miles by the Georgemas Junction and Wick section of the Highland Railway, with stations at Bilbster—9 miles ESE of Georgemas and 5 WNW of Wick—and at the town of Wick. It is also traversed by two main roads to Thurso, by one northward along the coast to Huna and Dunnet, and by one along the coast southward by Lybster to Sutherland; and there are a number of excellent district roads. The industries other than farming are connected with the town of Wick, under which they are noticed. Besides the town of Wick the parish contains also the villages of Broadhaven, Keiss, Newton, Reiss, and Staxigoe. The principal mansions are Ackergill, Bilbster, Hempriggs, Keiss, Reiss, Stirkoke, Thrumster, and Thuster.

Wick is in the presbytery of Caithness and synod of Sutherland and Caithness, and the living is worth £445 a year. The church is noticed in connection with the town. Ecclesiastically the parish is divided into Wick, Pulteneytown, and Keiss, and besides the churches noticed under the town there are Free churches at Keiss and Bruan, and a Baptist church at Keith. Under the landward school board Bilbster, Kilminster, Staxigoe, Tannach, Thrumster, West Banks, Whaligoe, and Wick schools, with accommodation for 80, 160, 120, 80, 200, 350, 80, and 110 pupils respectively, had, in 1883, attendances of 27, 69, 69, 45, 55, 190, 40, and 90, and grants of £28, 19s. 4d., £56, 9s., £38, 15s., £31, 17s. 6d., £42, 2s. 1d., £161, 16s., £29, 4s. 10d., and £77, 11s. Wick unites with Latheron to form the Latheron combination which has a poorhouse, with accommodation for 50, but the number of inmates seldom exceeds 10. The chief proprietor is Garden Duff-Dunbar, Esq. of Hempriggs; and 7 others hold each an annual value of £500 or upwards, 17 hold each between £500 and £100, and 116 hold each between £50 and £20. The land rental increased between the middle of last century and the middle of the present century nearly twelve-fold, but during that time large outlays were made by the proprietors for improvements. Valuation (1885) £24,561, 7s., exclusive of the town, but inclusive of £604 for the railway. Pop. (1801) 3986, (1831) 9850, (1861) 12,841, (1871) 13,291, (1881) 12,822, of whom 6079 were males and 6743 females, of whom 4769 (2269 males and 2500 females) were in the landward portion, while 6820 were in the ecclesiastical parish. Houses in

the landward part (1881) 991 inhabited, 29 uninhabited, and 1 being built.—*Ord. Sur.*, shs. 116, 110, 1878-77.

Wick, a royal burgh, seaport, seat of trade, and the county town of Caithness, at the head of Wick Bay, near the middle of the E coast of the parish just described. It is the eastern terminus of the Sutherland and Caithness section (1874) of the Highland railway, and by rail is 161¼ miles NNE of Inverness. By road it is 18½ miles S of Huna and John o' Groat's House, and 14¾ NNE of Lybster. By sea it is about 50 miles S of Kirkwall, and 110 NNW of Aberdeen. The town may be said to consist of three portions, Wick proper to the N of Wick Water, Louisburgh still farther N, and Pulteneytown to the SE on the S side of Wick Water. The burgh was formerly confined within narrow limits, but in 1883 the sheriff granted a petition praying for the inclusion within the boundary of both Louisburgh and the high ground on the opposite side of the river from Wick about the railway station. In the time of the Vikings, from whom it received its name, it seems to have been a resort of some importance, and mention of it occurs in the Sagas as early as 1140, when 'Earl Rögnvald went over to Caithness and was entertained at Vik by a man named Harold;' but its modern history may be said to date from 1589, when Wick proper was constituted a royal burgh by charter of James VI. So little idea, however, had the citizens as to their rights and privileges thus obtained, that the burgh practically remained under superiors—first the Earls of Caithness and thereafter the families of Ulbster and Sutherland—like a mere burgh of barony till the Municipal Reform Act of 1833. There are no burgage lands, and the Duke of Sutherland is still feudal superior. Wick itself consists of a narrow crooked street called High Street, running in a general line N and S along the N bank of the river, and with closes and lanes running off on both sides. It is poorly edificed. Louisburgh, which dates from the latter part of last century, lies to the N and NW. Opening off High Street southward is the only well-built street of the town, the short Bridge Street, which crosses the river by a fine stone bridge of three arches erected in 1874. This leads to Pulteneytown, which is divided into Lower Pulteneytown, situated on low ground adjoining the bank of the stream, and Upper Pulteneytown, situated on the high ground overlooking the bay. The greater portion of both lies along streets regularly laid out at right angles, Upper Pulteneytown having in addition a large but somewhat neglected central square. This suburb, which is the seat of all the trade, and contains more than half the whole population, was laid out by the British Fisheries Society in 1808, shortly before they commenced operations at the harbour, and was designed to be a model fishing-town. Wick town-hall, in Bridge Street, is a somewhat dingy building with a sandstone front and a cupola-shaped belfry over the doorway. The county buildings, erected in 1866 at a cost of £6000, are also in Bridge Street, and contain a good court-room with retiring rooms and accommodation for the various county offices. The prison behind the town-house has been disused since 1882. The parish church, at the W end of the town, was erected in 1830 at a cost of £5000, and is a poor Gothic building with a spire. It contains 1900 sittings. The pre-Reformation parish church, dedicated to St Fergus, is supposed to have stood at Mount Halie, near the E end of the town, but a more recent structure—the predecessor of that removed to make way for the present building—occupied a site close to the existing church. The only traces of it now remaining are the structures called the Sinclair Aisle and the Dunbar Tomb. At Pulteneytown there is a *quoad sacra* church erected in 1842, and containing 550 sittings. The Free church in Bridge Street is a good building, erected in 1862. Of two Free churches in Pulteneytown the one dates from the Disruption, and has a spire added in 1862. The other—Reformed Presbyterian till 1876—was built in 1839, and contains 380 sittings. The United Presbyterian church in Pulteneytown, built in 1878-79 at a cost of £4000, and containing 700 sittings, replaced an older church erected in 1815. The original Congregational church in Wick, built in 1799, was replaced by the present building on a different site in 1882. It contains 500 sittings. The Evangelical Union church, with 520 sittings, was erected in 1845. St John's Episcopal church, in Pulteneytown, a building of 1870, Decorated Gothic in style, has 150 sittings, and there are also a small Baptist church (1809), with 150 sittings, and St Joachim's Roman Catholic church in Pulteneytown, erected in 1837, and containing 250 sittings. The Temperance Hall, erected in 1842, has accommodation for about 1000 persons. Two of the bank offices are very good buildings, and there is a fine hotel close to the bridge erected at the time of the opening of the railway. Besides the stone bridge at Bridge Street, there is a wooden bridge farther down the river near the harbour. The old burying ground was round the church, but owing to its crowded condition, a new cemetery was formed in 1872 to the S of Pulteneytown. Under the burgh school board the Pulteneytown Academy, North Wick and South Wick schools, with accommodation for 519, 300, and 280 pupils respectively, had, in 1884, attendances of 334, 234, and 259, and grants of £323, 15s., £204, 15s., and £226, 8s. 6d.

The jurisdiction of the port of Wick extends from Bonar-Bridge round all the E, N, and W coast as far as Rhu Stoer on the W coast of Sutherland, and takes in also the island of Stroma in the Pentland Firth. It thus includes the harbours of Little Ferry, Helmsdale, Lybster, Broadhaven, Scrabster, and Portskerry, besides numerous creeks. Except as regards fishing-boats, the shipping trade is mostly confined to Wick. In 1850 the number of vessels belonging to the port was 54, with an aggregate tonnage of 3445; in 1875 there were 65 sailing vessels, with an aggregate tonnage of 6412, and 1 steam vessel, with a tonnage of 108; and in 1884 there were 56 sailing vessels, with an aggregate tonnage of 5085. The following table shows the tonnage of vessels that entered from and to foreign and colonial ports and coastwise with cargoes and ballast, in various years:—

	Entered.			Cleared.		
Year.	British.	Foreign.	Total.	British.	Foreign.	Total.
1860	103,706	4,770	108,476	98,547	8,648	107,195
1867	79,358	5,271	84,629	75,853	5,146	80,999
1874	92,840	5,310	98,150	82,731	4,778	87,509
1883	108,714	13,651	122,365	87,195	13,496	100,560

The exports are chiefly fish, but grain, cattle, and country produce generally are also sent away. The imports are principally coal, wood, and goods suited for a general country trade. There is regular steam communication with Aberdeen and Granton twice a week in summer and once in winter, and with Kirkwall and Lerwick once a week.

The commerce of early times seems to have found accommodation in the mouth of the river, and at small jetties on the N side; and no attempt to form a regular harbour was made till 1810, when the first one was constructed, partly from Government funds, and partly with money furnished by the British Fisheries Society, originally founded in 1786 for the purpose of developing the fisheries round the British coasts. The works then executed cost £14,000; but as they proved inadequate for their purpose, improvements were carried out between 1825 and 1831 at a cost of £40,000, and the works brought into the state in which they remained down to 1882. From the increased size of vessels and boats employed in connection with the fishing, this new harbour was, within a few years, again found too small, and in 1844 the Fisheries Society obtained an Act of Parliament empowering them to enlarge it. Nothing was, however, done, and in consequence of the insufficient nature of the accommodation, and the harbour's being a tidal one, and having its mouth so placed to shelter it from the sea that boats entering it had to

broach broadside to the sea before running in, great loss of life occurred in 1845, and again in 1848. In 1857 a fresh Act was obtained, but as the scheme proposed under it required the sanction of the Admiralty, and that body wished for the formation of a harbour of refuge which the Society could not afford to carry out, nothing was done till 1862, when it was agreed that a modified harbour of refuge should be formed. This was to be accomplished by the construction of a breakwater running out from the S shore of the bay 430 yards to the SE of the old works, and extending 1450 feet outward at right angles to the shore, terminating in 30 feet of water, and sheltering an area of about 25 acres, of which more than 20 had a depth of over 2 fathoms at low water. The force of the waves in the bay seems, however, to have been underestimated, if, indeed, the principle of construction was not wholly wrong; and year after year portions of the great pier were thrown down. At last, after the Society had expended £62,000 of a Government loan, £54,000 of their own funds, and £40,000 of surplus harbour rates, in terrific gales during the years 1871 and 1872—when the force of the waves was such as to break iron bars measuring 8 by 3 inches—the whole structure was completely ruined, except a fragment of the shore end, and operations were abandoned in 1874, from which time till 1880 the storms of each winter swept away portion after portion of what remained. In 1879 a fresh Act was obtained by the Fisheries Society, empowering them to hand over the whole works to a body of trustees elected by public bodies in the town, while all sums against the harbour for repayment of the sums expended on it by the Society were abandoned. The old works were injured by the storms of 1880; and the trustees obtained from the Treasury, first a remission of interest, and ultimately in 1882 a suspension of the present repayment of the £60,000 due to the Public Works Loan Commissioners; and under a provisional order obtained in 1883, they have proceeded with new works which are estimated to cost £90,000, of which £50,000 is to be obtained on loan from the Public Works Commissioners. These operations contemplate the lengthening of the south quay 300 feet, the erection of a new north quay outside the present one, so as to enlarge the existing harbour by 2½ acres, and the deepening of the whole area by 8 feet, the extreme depth of the entrance at low water being thus about 17 feet.

The great industry of Wick is fishing, particularly herring fishing. Prior to 1768 the only herring caught were by hand lines for bait; but then, under the encouragement of a parliamentary bounty, boats were fitted out for systematic prosecution of the trade. In that year, probably from inexperience, operations failed, but in 1782, 363 barrels were caught, and in 1790, 13,000 barrels; and ever since the formation of the harbour it has been frequented by large numbers of boats from all quarters. During the season, in July and August, this gives the place a somewhat 'ancient and fish-like smell,' and herring and herring barrels are everywhere to be found along the shore, sometimes occupying considerable spaces along the sides of the streets in the portion of the town nearest the harbour. The fishermen come from all parts of Scotland, the greater number being 'hired men' from the Western Highlands and Islands. The fishery district of Wick extends from Whale Goe or Whaligoe, 7 miles N by W of the town of Wick, round the rest of the Moray Firth and N and W coasts as far as Cape Wrath. It embraces the fishing towns and villages of Whaligoe, Sarclet, Wick, Ramsgoe, Broadhaven, Greenigoe, Uttergoe, Elzie, Staxigoe, Ackergill, Keiss, Nybster and Auckingill, Freswick, Duncansbay, Stroma, Huna, Gills, Mey, Scarfskerry, Ham, Brough, Dunnet, Murkle, Thurso and Scrabster, Crosskirk and Brims, Sandside, Portskerry, Strathyhead, Armadale, Kirktomy, Farr, Torrisdale, Scullomy, Talmine, Eriboll, and Smoo. Half of the boats and men employed, and about two-thirds of the first-class boats, belong to Wick itself and the neighbouring places. Belonging to the district there were, in 1883, 388 first-class, 49 second-class, and 336 third-class boats, employing 2642 fisher men and boys and 3776 other persons. The boats were valued at £51,507, the nets at £37,916, and the lines at £3458. The number of boats fishing within the district, most of them from Wick harbour and the neighbouring Broadhaven, in 1821 was 595, and from this time it gradually increased till 1831 when it was 1021, fell off again in 1838 to 566, increased in 1857 to 1100 and in 1862 to 1122, and has since then, owing to the insufficient harbour accommodation, fallen off very largely. The number in 1883 was 518, and the total catch 120,304 crans, the best average fishing per boat ever made. There were employed in connection with these boats 3367 fisher men and boys and 2186 other persons, and the total number of barrels cured was 155,668, of which 135,842 were exported to the Continent. A bank within ten miles of Wick, and other banks beyond, afford excellent white fishing, the town being in winter and spring one of the great centres of this industry. The number of cod, ling, and hake cured in 1883 was 69,004; and over £25,000 worth of other fish, including crabs and lobsters, were captured. Minor industries are the manufacture of ropes, sails, and herring nets; and there is a large steam sawmill in Wick, and a distillery and brewery in Pulteneytown.

The burgh is governed by a provost, 3 bailies, a dean of guild, a treasurer, and 9 councillors; and under the General Police and Improvement Act of 1862, which was adopted in 1874, the councillors are also police commissioners, but the police force is united with that of the county. The British Fisheries Society are superiors of Pulteneytown, but there are 12 improvement commissioners who exercise local power, and who also, under the Public Health Act, form the Local Authority. There is a separate police force of 3 men (one to every 1691 of the population), under a superintendent with a salary of £50 a year. Gas is supplied by a private company constituted in 1846. Pulteneytown is supplied with water from Loch Hempriggs, and a supply was introduced into the other districts in 1882 from Loch of Yarehouse at a cost of £6000. The town has a head post office, with money order, savings' bank, insurance, and telegraph departments, branch offices of the Bank of Scotland, British Linen Company, Commercial, North of Scotland, and Town and County Banks. There is also a branch of the National Security Savings' Bank, agencies of 39 insurance companies, and several good hotels. The newspapers are the Liberal *John o' Groat Journal* (1836), published on Thursday, and the Independent *Northern Ensign* (1850), published on Wednesday evening. Among the miscellaneous institutions may be noticed a custom-house, a station of the Naval Reserve, with buildings erected in 1876 on the South Head, beyond Pulteneytown; a Freemasons' hall, a lifeboat station, two public newsrooms, a chamber of commerce, artillery and rifle volunteers, a branch of the Shipwrecked Mariners' Society, and the usual benevolent and philanthropic associations. Sheriff ordinary and commissary courts for the county are held every Tuesday and Friday during session, and small debt courts for the parishes of Wick, Watten, Bower, and Canisbay every Tuesday during session. Down till 1828 these courts were held at Thurso. (See THURSO.) Quarter sessions are held at both Wick and Thurso, and justice of peace small debt courts on the first and third Mondays of each month. There is a weekly market on Friday, and there are fairs on the second last Tuesday of July, on 17 November *o. s.*, or the Tuesday thereafter, and on the last Friday of every other month. There is a coach

Seal of Wick.

to Castletown and Thurso, and another to Lybster and Dunbeath every day.

The parliamentary burgh, which includes Pulteneytown, Louisburgh, Broadhaven, and a small district round, as well as Wick proper, unites with Dingwall, Tain, Cromarty, Dornoch, and Kirkwall in returning a member to parliament. Parliamentary constituency (1885) 941; municipal 448. Valuation, royal burgh, (1875) £4691, (1885) £5585, including £478 for the railway; parliamentary burgh (1875) £21,892, (1885) £24,218. Pop. of extended royal burgh, 2954; inhabited houses, 527. Pop. of parliamentary burgh (1841) 5522, (1861) 7475, (1871) 8131, (1881) 8053, of whom 3810 were males and 4243 were females. Houses (1881) 1258 inhabited, 32 uninhabited, and 10 being built. Of the whole population 5253 were in Pulteneytown, 1860 in Wick proper, and 940 in Louisburgh; and of the inhabited houses 791 were in Pulteneytown, 293 in Wick proper, and 174 in Louisburgh.—*Ord. Sur.*, sh. 116, 1878.

Wigtown or **Wigton**, a town and a parish on the E border of Wigtownshire, and on the W shore of Wigtown Bay. The name is derived either from *wic*, 'a village,' and *ton*, 'a hill;' or from *wic*, 'a bay,' and *ton*, 'a town'—derivations which are both supported by the actual position of the town. The form Wigtown is generally used so as to distinguish the Scottish burgh from the Cumberland town of Wigton.

The town is a royal and parliamentary burgh, a seaport and seat of trade, and ranks as the county town of Wigtownshire. It is situated on a tabular hill of about 200 acres in area, rising to a height of over 100 feet above sea-level, and commanding an extensive view. It has a station on the Wigtownshire railway, and stands about 3 furlongs NNW of the mouth of the Bladenoch, 7¼ miles S by E of Newton-Stewart, 11 N of Whithorn, 26 E of Stranraer, and by road 129 SSW of Edinburgh. As seen from a distance the town presents a very picturesque appearance; and its neatness, cleanliness, and general air of comfort and good taste favourably impress those who enter it. The houses are built in a great diversity of styles, which lends an air of quaint variety to the principal streets; while some of the more recent edifices attain a very considerable degree of elegance. The principal locality in the town is the central rectangle, about 250 yards long, and covering fully an acre of ground. The centre of this space is occupied by a public bowling-green, surrounded by gravelled walks, shaded by trees and shrubs, the whole being divided by a railing from the roadway, which runs all round. The site of this public square, which adds very much to the beauty of the town, was in the old days used as a common dunghill; and it is one of the stories of the town that on one occasion during an election, a public banquet was given on a temporary platform of boards, hastily erected on this unsavoury site. The other main thoroughfares of the town are more or less directly connected with this central square. Within its bounds stand the old and new burgh cross. The former consists of a column 10 feet high, and 18 inches in diameter, resting on a square base, and crowned by a square stone on which dials are sculptured. The new cross was erected to commemorate the battle of Waterloo, although it bears the date 1816, the year after that event. It is an elegantly sculptured stone monument, on an octagonal base, and is about 20 feet high. It is surrounded by a railing. The town-hall stands at the lower extremity of the square, on the site of an older building of the same nature, erected about 1756. The present fine Tudor edifice was built in 1862-63, and has a lofty tower. It contains a court-room and the various county offices, besides a large assembly-room. On the two sides of the entrance are carved the burgh arms of Stranraer and Whithorn; and above the arched windows, the initial letters of the names of the principal places in the county. The burgh arms of Wigtown appear on the tower, near a slab bearing the royal arms, which was taken from the former court-house, and is now placed over the side-entrance. A bell, weighing over 7 cwt., was presented by Provost Murray in 1881, in place of one dated 1633. The prison for the Lower District of the county was legalised in 1848, but was closed in 1878. Other noteworthy buildings, besides the churches, are the board school and the bank offices.

The ancient church of Wigtown stood on a retired spot about 100 yards from the E end of the town, and was dedicated to St Machute, who died in 554. Given by Edward Bruce, brother of King Robert, to the monks of Whithorn, it became afterwards a free rectory under the patronage of the crown; though about 1650 the patronage was acquired by the Earl of Galloway. The original church was rebuilt in 1730, repaired in 1770, and re-roofed in 1831, but is now in a state of ruin. The present parochial church, erected in 1853, adjoins the ruin. It is an ornamental structure with a handsome spire, and contains 660 sittings. The Free church is in the Quay Road, in the SW of the town, and contains 400 sittings. The U.P. church, built in 1845, with 700 sittings, is an unpretentious building near the townhead. The only other church in Wigtown is the Roman Catholic church of the Sacred Heart, built in 1879 to hold 250. It has a school connected with it with an average of 60 pupils. The other schools in the town are the burgh and parochial board school, the Normal school, and the Charity school. The accommodation, average attendance, and government grant for these in 1883-84 were respectively 165, 156, £154; 116, 48, £24; 154, 48, £38. The cemetery surrounds the parochial church; and contains the tombstones of the Martyrs of Wigtown, whose fate is described below. That of Margaret Wilson is a horizontal slab supported by four short pillars, and bears the following inscription in addition to her name:—

> 'Let earth and stone still witness beare,
> Their lys a virgine martyr here,
> Murther'd for owning Christ supreame
> Head of His Church, and no more crime,
> But not abjuring Presbytury,
> And her not ouning Prelacy.
> They her condem'd by unjust law
> Of Heaven nor Hell they stood no aw;
> Within the sea ty'd to a stake,
> She suffered for Christ Jesus sake.
> The actors of this cruel crime
> Was Lagg. Strachan. Winram. and Grhame.
> Neither young years nor yet old age
> Could stop the fury of there rage.'

A small upright stone commemorates her fellow sufferer, Margaret MacLachlan; and a plain upright-slab records that

> 'Here lyse William Johnston
> John Milroy George Walker who was with
> out sentence of law hanged by Major
> Winram for their adherence to Scot
> lands Reformation covenants nation
> al and solam leagwe
> 1685.'

Wigtown has a post office with money order, savings' bank, and telegraph departments, branches of the British Linen, Clydesdale, and National Banks, and 18 insurance agencies. The chief hotels are the Galloway Arms and the Commercial Inn. Among the other institutions are a mechanics' institute, the Wigtownshire agricultural society, a gas company, a masonic lodge, the Wigtownshire railway company (incorporated 1872), and various religious and benevolent associations. A cattle market is held on the fourth Friday of every month; but various other periodical markets have been given up.

The old harbour of Wigtown was a creek at the mouth of the Bladenoch, but became blocked about 1818 in consequence of a change in the river's current. The new harbour, about ¼ mile S of the town, was formed at a considerable cost by the corporation; and has quays and a breast-work. Ships of 300 tons burden can approach the quay. The little trade that is carried on consists in the export of agricultural produce and the import of coal, lime, and manures. The tonnage belonging to the port in the annual average of 1845-49 was 3892; in 1856, 2080 in 54 vessels; in 1875, 1931 in 40 vessels; and in 1884, 1466 tons in 35 vessels, none

of them steamers. There entered in 1883 vessels of an aggregate tonnage of 5736; and cleared vessels of an aggregate tonnage of 5412. Wigtown is the seat of a custom house which comprehends in its district the creeks of Wigtownshire and Kirkcudbright, from the Mull of Galloway to the mouth of the river Fleet.

Wigtown, described on its seal as an 'antiquissimum burgum,' has been asserted to have been a royal burgh from the reign of David II. But the original grants having been lost or destroyed, James II. granted a new charter in 1457, which was confirmed by the Scottish parliament in 1661. In 1662 Charles II. confirmed and extended the burghal rights in a new charter. The burgh is governed by a provost, 2 bailies, a treasurer, and 15 councillors. The municipal revenue in 1884-85 was £577; and the financial affairs were flourishing. Landed property of the burgh at one time extended to 1200 acres, but has been much diminished by alienation; but it is still considerable, and includes the farms of Maidland and Kirklandhill. The municipal constituency in 1885 was 285, of whom 63 were females. Wigtown unites with Whithorn (230), Stranraer (788), and New Galloway (60) in sending a member to parliament, and is the returning burgh; but under the Redistribution Bill of 1885 it is proposed to merge it in the county. In the beginning of 1885 its parliamentary constituency was 219. Sheriff, ordinary, and commissary courts, and a sheriff small debt court are held every Tuesday during session; a justice of peace court is held on the first Friday of every month; and quarter sessions on the first Tuesday of March and May, and the last Tuesday of October. Valuation (1875) £5479, (1885) £5573, *plus* £156 for railway. Pop. of parliamentary burgh (1841) 1870, (1861) 2027, (1871) 1780, (1881) 1722, of whom 967 were females. Houses (1881) inhabited 395, vacant 23.

Seal of Wigtown.

History and Antiquities.—A grassy mound between the town and the harbour marks the site of Wigtown Castle, which stood on the banks of the former course of the Bladenoch. Although the outline of the structure was traced in 1830, the materials had long previously been removed for building purposes. Whether or not it was originally founded by early Saxon invaders, it appears to have existed in the time of Edward I. of England, for whom it was held by Walter de Currie in 1291, and by Richard Siward in 1292. Sir William Wallace is said to have captured it in 1297, and to have entrusted it to Adam Gordon. Subsequently it was delivered to John Baliol, as King of Scotland, and served for a time as a royal residence. Its place in history is insignificant, and its progress through gradual decay to eventual destruction has not been traced. A Dominican priory was founded near the castle in 1267 by Devorgille, mother of John Baliol, and though never very important, received privileges from various kings. Alexander III. granted to the monks a large share of the rents of the town of Wigtown, and they also held royal grants of fisheries on both sides of the river. James IV. used to lodge within its walls on occasion of his frequent pilgrimages to St Ninian's shrine at Whithorn, and repaid its hospitality by various gifts and grants. The priory was surrounded by an extensive cemetery; but it never attained much eminence, and passed into ruin before 1684. Though a portion of its walls was to be seen in 1818, they cannot now be traced. Wigtown gave the title of Earl from 1606 till 1747 to the family of Fleming. See BIGGAR.

The most striking incident in the history of the burgh is the execution of the 'Drowned Women of Wigtown,' whose graves are mentioned above. Margaret Wilson, a girl of eighteen years, and Margaret MacLachlan, aged sixty-three, together with Agnes Wilson, a younger sister of the first-named, arrested on a charge of nonconformity to Episcopal Church-government, rebellion, and presence at field conventicles, were brought before the judges whose names appear in the epitaph already quoted. All three refused the Abjuration Oath when it was put to them, and all were brought in guilty. The sentence was at once pronounced, that the three should be tied to stakes fixed within the flood-mark in the Water of Bladenoch, where the sea flowed at high water, so that they should be drowned by the incoming tide. Agnes Wilson was got out by her father (who had conformed) upon a bond of £100, which was duly exacted on her non-appearance, but on the other two the sentence was performed 11 May 1685. 'The two women,' writes Wodrow, 'were brought from Wigtown, with a numerous crowd of spectators, to so extraordinary an execution. Major Windram, with some soldiers, guarded them to the place of execution. The old woman's stake was a good way in beyond the other, and she was the first despatched, in order to terrify the other to a compliance with such oaths and conditions as they required. But in vain, for she adhered to her principles with an unshaken steadfastness.' After the water had covered Margaret Wilson, but before she was quite dead, she was pulled up; and when she had recovered, another chance of taking the Abjuration Oath was given to her. 'Most deliberately,' continues the account, 'she refused, and said, "I will not; I am one of Christ's children; let me go!" Upon which she was thrust down again into the water, where she finished her course with joy.' Efforts have been made to prove that the sentence was never really executed, but that a recommendation to pardon, made by the Lords of the Privy Council, which appears in the Council registers, was carried into effect. Abundant evidence has, however, been brought to prove the fatal issue of events—probably before the notice of remission had time to be conveyed from Edinburgh to Wigtown. The Bladenoch has altered its course since that tragic event, but its former channel is still to be traced, a little to the N of its present course. On Windy Hill, which is the highest point of the eminence on which the town stands, a monumental obelisk has been raised, at a cost of £200, to the memory of the martyrs. See Mark Napier's *Case for the Crown* (1863), and the Rev. Dr Arch. Stewart's *History Vindicated* (2d ed. 1869).

The parish of Wigtown is bounded on the N and W by Penninghame, S by Kirkinner, and E by Wigtown Bay. Its greatest length, from E to W, is 4½ miles; its greatest breadth is nearly 4 miles; and its area is 9633 acres, of which 1793½ are foreshore and 34¾ water. The northern boundary is traced for 3¼ miles by the exceedingly zig-zag course of the Bishop Burn, and the Bladenoch winds 6⅜ miles east-by-southward along all the Kirkinner boundary. The E frontier of the parish is fringed by a broad expanse of flat sand and salt marsh, 2½ miles long by 2 broad, covered by the sea at high tide, but dry at low water, across which the streams force their way, to fall into the estuary of the Cree. The surface of the parish in no place much exceeds 200 feet above sea-level. Wood Fell, in the NE, attains that height, together with several points close by, as does also a height in the W at Balmeg on Torhousemoor. The S district is tumulated and hillocky, but nowhere attains a much higher level than 100 feet. A district to the NE, about 2½ miles by 1½ mile in extent, and forming the S extremity of the Mosses of Cree, which stretch into Penninghame, is an almost uninterrupted level, bearing evidence of having been at successive epochs covered by the sea, by forest, and by bogs. Though much of it has been reclaimed for the plough, Barrow or Burgh Moss and Carsegown Moss still cover a considerable part of its surface. The centre and SW of the parish are occupied partly by Claughrie and Torhouse Moors. The soil of the parish is chiefly a dry light hazel mould, lying on till or gravel. The prevailing rocks are greywacke or greywacke slate. Besides the streams on the boundaries, the only other is the Barrowmoss Burn, which flows from

the skirts of Wood Fell E through the centre of the parish to the estuary of the Cree.

Besides the royal burgh of Wigtown, the parish contains the village of Bladenoch. The S is traversed by the high road to Portpatrick, and the E by two roads to Newton-Stewart. The Wigtownshire railway runs from N to S through the E of the parish for about 4 miles. The chief mansion in the parish is Torhouse. The chief industry is agriculture. There are some small manufactures in Wigtown, and there is a distillery at Bladenoch.

The parish is the seat of a presbytery in the synod of Galloway; the living is worth £455. The parochial church and the schools have already been noted above. The Free Church also has a presbytery of Wigtown. Valuation of parish (1884-85) £6305, 13s. 9d. Pop. (1755) 1032, (1801) 1475, (1831) 2337, (1861) 2637, (1871) 2306, (1881) 2198, of whom only 395 were landward. Houses (1881) inhabited 481, vacant 25.

The chief antiquities are the Standing Stones of Torhouse, and Torhouskie Fort or Cairn. The former are of unpolished granite, from 2 to 5 feet long, from 4 to 9 in girth, and from 5 to 12 asunder. They form a circle of 218 feet, and number 19 on the circumference and 3 in the centre. Some antiquaries regard them as Druidical remains; others, among whom are Sibbald, Timothy Pont, and Symson, prefer to regard them as monuments to the Scottish King Galdus, who conquered the province from the Romans. Torhousekie Fort is situated on a rising-ground in the W, and shows remains of two circular stone walls. There is a well dedicated to St Ninian near the intersection of Barrowmoss Burn and the Newton-Stewart road.—*Ord. Sur.*, sh. 4, 1857.

Wigtownshire, a maritime county in the SW extremity of Scotland, forms the W division of Galloway, and contains the most southerly land in Scotland. It is bounded on the N partly by the mouth of the Firth of Clyde, but chiefly by Ayrshire, E by Kirkcudbrightshire, S by the Irish Sea, and W by the Irish Channel. It lies between 54° 36′ 45″ and 55° 3′ 40″ N lat., and between 4° 15′ 50″ and 5° 7′ 10″ W long. The boundary, beginning at Galloway Burn on the E bank and near the entrance of Loch Ryan, passes tolerably due E in an irregular line along the courses of the Main Water and Cross Water of Luce and other smaller streams, past Lochs Maberry and Dornal, till it strikes the river Cree at Carrickburnfoot, whose course it follows at first eastwards and then southwards, so that the entire boundary with Kirkcudbrightshire is formed by the river Cree and its estuary Wigtown Bay. The S boundary, from Burrow Head, follows the huge curve of Luce Bay, which, opening with a width of 18½ miles, strikes inland for 16½ miles to within 6½ of the head of Loch Ryan, and covers an area of 160 square miles. From the Mull of Galloway, forming the western horn of Luce Bay, the coast runs N to Corsewall Point, where it bends to the W for a short distance to Milleur Point, on the W of the entrance to Loch Ryan. Thence it follows the long narrow indentation of Loch Ryan, which stretches 10 miles S by E into the interior, until the point whence we began to trace the boundary is reached. But for the indentations of Luce Bay and Loch Ryan the outline of the county would be proximately a square of about 29 miles on each side; but these two arms of the sea cut off from the main body a long narrow peninsula, tapering towards its S end, and connected with the rest of the shire by a narrow neck about 6½ miles broad. Its greatest length, from E to W, is about 30½ miles; its greatest breadth, from N to S, is 28½ miles; and its area is 512⅓ square miles or 327,906 acres, of which 14,330 are foreshore and 2828¼ water. Wigtownshire is the seventeenth among Scottish counties in point of size, and the twenty-second in point of population.

The coast, inclusive of the great and small inlets, has an extent of about 120 miles, for the most part bold and rocky, and in very many places pierced with caverns. There are but few recesses in which a large ship could safely ride at anchor or attempt to land a cargo, and not very many that afford fair landing-places

for even small boats. Loch Ryan, indeed, may be regarded as one fine harbour, and two or three of the creeks of Wigtown Bay are decidedly hospitable; but most of Luce Bay, and the great majority of the small bays and other openings, are flanked or beset with rocky and fissured cliffs, often rising sheer from the water. The head of Luce Bay is, however, bounded by a stretch of sandy beach. The small bays are exceedingly numerous, and with the small headlands form a slightly waving or serrated coast-line. The chief headlands are Burrow Head, at the dividing point between Wigtown Bay and Luce Bay; the Mull of Galloway, the most southerly land in Scotland, at the dividing point between Luce Bay and the Irish Channel; and Corsewall Point in the extreme NW of the county at the meeting of the Irish Channel and the Firth of Clyde. The most important harbours are Stranraer at the head and Cairnryan on the E side of Loch Ryan; Carty on the river Cree, 2¼ miles SSE of Newton-Stewart; Wigtown, on the upper part of Wigtown Bay; Garlieston, near the middle of the W side of Wigtown Bay; Isle of Whithorn, 2 miles NNE of Burrow Head; Port-William, near the middle of the E side of Luce Bay; Port-Logan, on the Irish Channel, 7½ miles NNW of the Mull of Galloway; and Portpatrick, on the Irish Channel, 10½ miles NNW of Port-Logan.

The interior is divided into three great districts. The peninsula, or rather double peninsula, W of Loch Ryan and Luce Bay, is known as the Rhinns of Galloway; the district which forms the broad-based triangular peninsula between Luce Bay and Wigtown Bay is called the Machers; while the rest of the county, N of the Machers and E of Loch Ryan, bears the loose general name of the Moors. The physical aspect of Wigtownshire is not strikingly varied, and presents few imposing landscapes. The surface, though partly low and level, offers in most parts the appearance of a continuous sea of knolls, and hills, and hillocks; but probably it aggregately rises less above sea-level than any other equally large district in Scotland. A considerable area of low level ground, bearing marks of having at a comparatively recent period been submerged by the sea, lies along the lower reach of the river Cree and the upper part of Wigtown Bay; and the isthmus between the head of Loch Ryan and Luce Bay bears similar traces. The heights, as the county recedes northwards, become bolder and of a more decidedly hilly character than near the coast; and along the Ayrshire border the loftiest average is reached on the skirts of the broad range of the southern highlands, which extends across Scotland to the coast of Berwickshire. Heathy hills, high mosses, and bleak fells thus occupy a large portion of the Moors. The Rhinns district is traversed from N to S by a watershed, which sends its drainage off on both sides. The Machers has mostly, like the Moors, a southern exposure, and both these districts send their waters chiefly to Wigtown and Luce Bays.

The chief heights in the Rhinns are, from N to S, Tor of Craigoch (409 feet), in Kirkcolm parish; Craighead of Lochnaw (484) and several points of 500 feet, in Leswalt; Broad Moor (500), a summit near Craigenlee (592), and Cairn Pat or Piat (593), the highest point of the Rhinns, in Portpatrick; Barmore Hill (463), in Stoneykirk; Barncorkrie Moor (507), West Muntloch (525), and Dunman (522), in Kirkmaiden. The Mull of Galloway, the most southerly point in Scotland, rises 228 feet above sea-level. In the Moors the chief heights are Cairnarzean Fell (735 feet), Cairnscarrow (761), Braid Fell (769), Brockloch Fell (769), and Mid Moile (844), in Inch parish; Bucht Fell (607), Balmurrie Fell (807), Quarter Fell (834), Stab Hill (725), Murdonochee (900), and Miltonish (970), in New Luce; Knock Fell (513) and Craig Fell (538), in Old Luce; Barskeoch Fell (579), Culvennan Fell (702), Eldrig Fell (742), Urrall Fell (604), and Craigairie Fell (1000), in Kirkcowan; Glassoch Fell (493) and an unnamed point near Loch Ochiltree (604), in Penninghame. In the Machers the chief heights are Craigeach Fell (426 feet), the Doon of May (457), Mochrum Fell (646), Bennan Hill (500), and

East Bar (450), in Mochrum parish; Carleton Fell (475) and the Fell of Barhullion (450), in Glasserton.

The streams of Wigtownshire are very numerous, but for the most part of short course and unimportant size. The chief is the Cree, which for 21½ miles forms the boundary between Kirkcudbright and Wigtown shires, just before it enters Wigtown Bay at Creetown. It is navigable up to Carty, but receives no noteworthy tributary from Wigtownshire. The Bladenoch, issuing from Loch Maberry on the Ayrshire border, has a course of about 23 miles S, SSE, and E to Wigtown Bay. It receives the Tarf Water, the Black Burn, and the Malzie Water on the right. The Luce Water is formed by the junction, at New Luce village, of the Main Water of Luce and the Cross Water of Luce. Its entire course within the county is about 15 miles. All these rivers contain salmon and trout. There are numerous other smaller streams that are frequented by anglers for the sake of trout-fishing. Among these may be mentioned the Black Burn, Bishop Burn, Comrie, Colinty, Cragoch, Cruise, Donnan, Glenburn, Kirklachie, Langabeastie, Moneypool, Penwhirn, Piltanton, Polnure, Pullaryon, and Sole Burns. The lakes are also numerous but small. In the Rhinns are Loch Connal in Kirkcolm parish and Soulseat, and Castle-Kennedy in Inch. In the Moors are Lochs Maberry and Dornal on the Ayrshire boundary; Loch Ochiltree, and Loch Cree on the Cree, in Penninghame; and Loch Ronald in Kirkcowan. In the Machers are Castle Loch, the four lochs of Mochrum, Eldrig Loch, and White Loch, in Mochrum. Other small lochs in various parts of the county are Lochs Derry, Heron, Barwhapple, Dernaglar, Clugston, Whitefield, and Black Loch. Dowalton Loch, at one time the second largest lake in the shire, was drained in 1862. At Logan there is an artificial fish-pond, built among the rocks on the shore, in which cod and other sea-fish are kept. Springs and wells of reputed miraculous or medicinal qualities are met with all over the county.

Geology.—There is little variety in the geological formations of Wigtownshire. If we except a narrow strip of ground on the W shore of Loch Ryan, which is occupied by Carboniferous and Permian rocks, the rest of the county is composed of Silurian strata. Both the lower and upper divisions of the Silurian system are represented; the latter occupying the promontory of Burrow Head and extending along the shore in the direction of the Isle of Whithorn. Magnificent sections of the members of this system are exposed on the rocky coast-line facing the Irish Channel, where the innumerable flexures of the strata may be studied to advantage. The prevalent strike of the strata throughout the county is NE and SW, and owing to constant folding certain subdivisions of the system are made to cover a great breadth of country. From the memoirs published by the Geological Survey, it would appear that the Lower Silurian rocks are divisible into certain groups in which there are two zones of black shale, the lower occupying the horizon of the Moffat series, the upper occupying the position of the Lead Hills black shales. These are separated by a considerable thickness of massive grits, greywackes, flagstones, and shales. The lower zone is exposed in Clanyard Bay, N of the Mull of Galloway, in Drumbreddan Bay, and again near Money Head, while the upper zone is admirably seen on the cliff about 2 miles S of Portpatrick. Some of the bands in these black shale zones are crowded with graptolites, and similar fossils occur in the Cairn Ryan slates, where they were discovered long ago by Mr Carrick Moore. One of the prominent subdivisions of the Lower Silurian formation in this county consists of a series of massive grey and reddish grits, which cover a belt of ground about 8 miles broad from Mochrum Loch to the high grounds N of Glenluce.

The Upper Silurian rocks, occurring on the shore between the Isle of Whithorn and Burrow Head, consist of brown crusted greywackes, flags, and cleaved shales, with which are associated numerous thin bands of dark shale yielding *Graptolithus Flemingii*, *G. priodon*, *Cyrtograptus Murchisoni*, with fragments of *Ceratiocaris* and *Orthoceratites*.

The Silurian strata are pierced by various igneous masses of small extent; all the large granite areas in Galloway being included in the county of Kirkcudbright. A few miles to the N of the Mull of Galloway at Laggantulloch Head there is a mass of granite covering an area of about 2 square miles. A mass of diorite, consisting of triclinic felspar, hornblende, with quartz and iron pyrites, occurs on the hills about 3 miles N of Kirkcowan, while another patch is to be found near Glenluce. Dykes of the same rock are also met with near the shore to the E of Mochrum Loch. There are numerous intrusive dykes of different varieties of quartz-felsite scattered throughout the county; the most interesting being certain talcose felstones or mica traps occurring at Innerwell Point and on Culvennan Fell.

The narrow band of Carboniferous strata has been traced for a distance of about 8 miles along the W side of Loch Ryan, where they form a fringe about ¼ mile in breadth between the Permian and Silurian rocks. From the fact that they are covered unconformably by the Permian strata, and from the nature of the organic remains and the characters of the beds, they have been provisionally classed with the Calciferous Sandstone series by the officers of the Geological Survey. The strata consist of red, grey, and mottled sandstones with purple clays. All the fossils with one exception consist of plant remains, comprising *Stigmaria*, *Calamites*, *Alethopteris lonchitidis*, etc.

Between the belt of Carboniferous strata just referred to and the W shore of Loch Ryan there is a strip of Permian strata about 9 miles in length and about 1 mile in breadth, consisting throughout of coarse breccia with thin seams of sandstone. Lithologically the rock closely resembles the Permian breccias of Ayrshire. It presents a tumultuous appearance, the blocks being angular or sub-angular, and measuring, in many cases, a foot across. From the nature of the included blocks it is evident that they have been derived from the denudation of the Silurian strata. On the Geological Survey map a basalt dyke is marked as penetrating this breccia, from which it may be inferred that it belongs to the later series of Tertiary dykes so common in the W of Scotland.

In the W portion of the county the general trend of the ice-marking is S and SSW, and the same direction is observable in the undulating ground between Stranraer and Whithorn. Along the banks of the Cree, however, the ice-markings run more or less parallel with the valley. These markings were evidently produced by the great ice-sheet which radiated from the tract of high ground on the borders of Kirkcudbrightshire and Ayrshire. A remarkable feature connected with the boulder-clay in this county is the arrangement of this deposit in oval-shaped mounds or 'drums,' usually coinciding in trend with that of the ice-markings. The peculiar appearance presented by these ridges is admirably seen on both sides of the Wigtownshire railway, between Newton-Stewart and Glenluce, and again between Wigtown and Whithorn. In this county there are certain sections where the boulder-clay yields broken fragments of shells, as for example at Port Logan and in Clanyard Bay on the W shore of the Mull of Galloway. In the tough laminated clays used as brick clays at Clashmahew near Stranraer, organic remains have been met with, but these brick clays do not occur at much higher levels than 60 feet. Shelly boulder-clay has also been noted in the course of the Geological Survey of the district at various localities on the shores of Loch Ryan. There can be little doubt that this deposit is more recent than the typical lower boulder-clay of inland districts, which is invariably unfossiliferous. The numerous boulders scattered over the low grounds of Wigtownshire is another characteristic feature of the glaciation of this county. Conspicuous amongst these erratics are the blocks of grey granite derived from the great mass of Cairnsmore of Fleet, and the mass lying between the Kells and Merrick ranges.

Along the shores of Loch Ryan and Luce Bay, and again along the estuary of the Cree, there are strips of flat land representing the 25-feet and 50-feet beaches. Sometimes these are partly overgrown, and more frequently the lower raised beach is obscured by great accumulations of blown sand. The largest development of sand dunes occurs in Luce Bay, between Balgreggan and the mouth of Piltanton Burn.

Economic Minerals.—Galena has been worked at the Knockibae mines, N of New Luce, and a vein of copper pyrites has been explored at Wauk Mill, near Kirkcowan. At Tonderghie, S of Whithorn, there is a vein of barytes associated with iron and copper pyrites. At Cairn Ryan the grey shales and flaggy bands have been extensively wrought for roofing slates, and also for pavement stones. The grey shales, yielding graptolites at Grennan, N of the Mull of Galloway, have also been quarried for roofing-slates. Excellent building stone is obtained from the Carboniferous sandstones on the W side of Loch Ryan, and from the greywacke bands and massive grits of the Silurian formation. The more flaggy bands in the grit series supply excellent lintels. The harder bands in the Silurian rocks are extensively used for road metal. The stratified clays have been used for the manufacture of bricks. Another noteworthy feature is the great development of peat mosses in the low grounds of the county, which have yielded an abundant supply of fuel. The extent of these peat mosses is somewhat remarkable, as may be seen by referring to the published survey maps of that region. (See Geological Survey Maps, 1, 2, 3, 4, and the explanations accompanying these sheets.)

Soil.—The soil of the low flat lands near the Cree and at the head of Wigtown Bay is all alluvial; and the Carse of Baldoon, which includes the larger part of these lands, is a strong clay, not unlike the rich soil of the carses on the Forth. The valley between Loch Ryan and Luce Bay has a deposit of sea-sand, interspersed with tracts of reclaimed shallow flow moss; and the low belt on the W side of Loch Ryan is also sandy. The soil of most of the Machers and much of the Moors is a dry hazel-coloured loam, often inclined to gravel, and generally incumbent upon rock. The Rhinns have a diversified and excellent soil, to a large extent arable. The central and northern districts of the Moors have extensive tracts covered with a soil of peat earth; and the large and deep 'flows' (as these peat mosses are called)—some from 8 to 10 miles long—while they chill the air with humid exhalations, prevent vegetation, and are quite useless for grazing purposes.

Climate.—The climate corresponds with the position of the county, the configuration of its surface, and the character of its shores. Rain falls often, and in large aggregate quantity, yet seldom without intermission during an entire day. The south-westerly winds usually bring rain; yet, except where artificial drainage has been neglected, it rarely injures the fruits of the soil. Snow seldom lies long; and frost is not often severe or protracted. The prevailing winds are from the S and the SW, and the severest storms of wind and the heaviest falls of rain and snow are from some point between the SW and the SE. A heavy gale sometimes blows from the NW, but generally subsides in the evening of the same day; and hence has arisen a local proverb that 'an honest man and the north-west wind go to sleep together.' The climate on the whole is favourable to health and longevity.

Wigtownshire is almost exclusively an agricultural and grazing county, its manufactures, commerce, and mining being but of little importance. According to the returns of 1881, 6323 of the entire population were engaged in agricultural, and 4960 in industrial, pursuits. Commerce employed 760, other occupations 3068, leaving 23,343 unoccupied and unproductive. Agriculture seems to have attained a considerable degree of excellence in this district in comparatively early times; and under the Baliols, before the 14th century, was flourishing. In the succeeding troublous times, however, the art relapsed, and for four centuries made but slow and feeble progress. In the first half of the 18th century improvements began, at first under Marshal Lord Stair, who devoted his retirement after 1728 to the encouragement of enlightened agriculture on his lands in Wigtownshire and in West Lothian. His example was gradually followed. In 1760 considerable improvements were introduced on the Earl of Selkirk's estate of Baldoon; and the Earl of Galloway also soon entered the same field. A better rotation of crops, the use of modern implements, the enclosing of fields, and other improvements took good effect; and these, seconded by the efforts of intelligent agriculturists and of the Agricultural Society of Dumfriesshire, brought about a considerable advance in farming by the beginning of the present century. At present the best districts offer as fine specimens of high-farming as are to be seen anywhere in the country; and the farmers of the other regions are only hindered by the difficulties of the soil from giving to the general face of the country as cultivated an aspect as that of more favoured localities. The farms are mostly of a medium size, and are usually let on leases of nineteen years. According to the returns of 1881, there were in this county 30 farms of 1000 acres and upwards, 64 from 500 to 1000, 423 from 100 to 500, 237 from 10 to 100, and 27 below 10. In 1884 there were 147,202 acres under crops, bare fallow, or pasture. The following table exhibits the acreage under the chief crops in various years:—

		1855.	1874.	1880.	1882.	1884.
Wheat,		7,343	4,969	2,106	2,191	1,194
Barley or Bere,		1,589	1,304	2,612	2,346	1,021
Oats,		34,602	31,431	33,515	34,063	35,579
Rye,		150	100	106	118	124
Beans,		1,089	408	378	590	318
Potatoes,		3,843	2,116	2,710	2,615	2,227
Turnips and Swedes,		15,289	16,093	15,227	16,076	16,238
Cabbages, Rape, etc.,		44	75	61	154	74
Other Green Crops,		..	247	162	168	182
Grass	Bare Fallow,	845	614	487	470	372
Grass	Grass in Rotation,	61,658	45,574	59,622	62,993	67,652
Grass	Permanent Pasture,	..	39,760	28,339	24,480	21,894

In 1884, 6 acres were under orchard, 73 in nursery grounds, and 8009 in coppice and plantations, excluding garden shrubberies.

The live stock falls entirely under the description already given under KIRKCUDBRIGHTSHIRE, and the authority there referred to. The following table shows the number of the various kinds of stock in different years:—

	1878.	1880.	1882.	1884.
Horses,	5,792	5,535	5,595	5,800
Cattle,	40,401	40,144	40,068	43,881
Sheep,	131,030	126,967	125,146	118,990
Pigs,	9,491	7,412	10,386	10,323

Wigtownshire is not a very well wooded county, although a good deal has been done in the way of planting since the time of Marshal Stair, already alluded to. It is said that he and his father planted annually, for a considerable number of years, as many as 20,000 trees. The policies of many of the private mansions are finely adorned with timber. The grounds of Castle-Kennedy in particular may be mentioned in this connection.

Manufactures and Trade.—The absence of coal effectually restrains the manufactures of the county, so that no really important manufacturing industry has been established in it. There are isolated establishments, as for instance, the distillery at Bladenoch, and the woollen mills in Kirkcowan parish, but these do little more than supply part of the local demand. The commerce consists almost wholly in the exchange of the produce of the soil, cattle, and sheep, for manufactured and other articles for home consumption. At one time timber

was imported from America, and timber and iron from the Baltic, but these trades have now dwindled, although some timber is still imported from Norway. At one time a large transit trade was maintained through the county between the north of Ireland on the one side, and the south of Scotland and north of England on the other. The passage of large herds of Irish cattle and of much British merchandise, together with the presence of numerous travellers, conferred a considerable local benefit, which, however, has now almost entirely been diverted by the development of steam navigation. Stranraer, however, has some little shipping trade; and there is a daily steamer passenger and goods service between this port and Larne and Belfast. The various smaller ports carry on a more or less brisk coasting-trade. The extension of railways into the county has also tended in some degree to bring back a proportion of the former transit trade. There are three lines of rail in Wigtownshire. The Portpatrick railway, opened in 1861, and leaving the Glasgow and South-Western system at Dumfries, enters the county at Newton-Stewart, and runs westwards to Stranraer, and thence SW to Portpatrick. The Wigtownshire stations are Newton-Stewart, Kirkcowan, Glenluce, Dunragit, Castle-Kennedy, Stranraer Harbour, Stranraer, Colfin, and Portpatrick. The Wigtownshire railway, branching from the Portpatrick line at Newton-Stewart, was authorised in 1872, and opened as far as Garlieston in 1875, and was thence continued S to Whithorn in 1877, a total distance of 19¼ miles. It has stations at Newton-Stewart, Wigtown, Kirkinner, Whauphill, Sorbie, Millisle, Garlieston, and Whithorn. Coaches run in connection with this line between Whauphill and Port William. The third line is the southern part of the Girvan and Portpatrick Railway, opened in 1876, which enters the county from Ayrshire at the N of the parish of New Luce, and thence runs nearly due S to join the Portpatrick railway at East Challoch near Dunragit. It has Wigtownshire stations at Glenwhilly and New Luce. The roads of the county are numerous, convenient, and good. For many years the only practicable road for wheeled vehicles was the old military road, constructed in the latter half of last century, which led from Newton-Stewart to Portpatrick. A newer and more level road now connects these points. Other main routes are the road from Glasgow to Stranraer, along the E side of Loch Ryan; the road running southwards from Newton-Stewart to Wigtown and Whithorn; and the road north-westward from Whithorn to Stranraer, by the shore of Luce Bay and through Glen Luce.

The royal burghs in the county are Wigtown, Stranraer, and Whithorn; the burghs of barony are Newton-Stewart, Glenluce, and Portpatrick; the chief villages are Aird, Bladenoch, Cairnryan, Drumore, Eldrig, Garlieston, Innermessan, Isle of Whithorn, Kirkcolm or Stewarton, Kirkcowan, Kirkinner, Lochans, Marchfarm, Merton, Monreith, Myreton, New Luce, Port-Logan, Port-William, Sandhead, Slohabert, Sorbie, and Stoneykirk. The chief seats are Galloway House (Earl of Galloway), Culhorn House (Earl of Stair), Ardwell, Barnbarroch, Castlewigg, Corsewall House, Craighlaw House, Craigenveoch, Dunragit, Dunskey, Freugh, Genoch, Glasserton House, Glengyre, Isle of Whithorn Castle, Lochinch Castle, Lochnaw House, Lochryan House, Logan House, Monreith House, Penninghame House, Park-Place, Physgill, Tonderghie, and Tor House, most of which have been separately noticed.

According to the *Miscellaneous Statistics of the United Kingdom for* 1879, 309,087 acres, with a gross estimated rental of £239,589, were divided among 1820 proprietors, 1 holding 79,174 acres (rental, £40,425); 3 holding 80,628 (£36,837); 3 holding 46,129 (£36,304); 8 holding 53,915 (£42,614), etc. The county is governed by a lord-lieutenant, a vice-lieutenant, 18 deputy-lieutenants, a sheriff (who is also sheriff of Kirkcudbrightshire and Dumfriesshire), a sheriff-substitute, and about 60 justices of the peace. Sheriff and other courts are held at Wigtown and Stranraer as detailed in the articles on these towns; the quarter-sessions also meets at stated intervals at Glenluce. The police force of the county numbered, in 1884-85, 22 men, with a chief constable receiving a salary of £175. The county returns one member to parliament; and its constituency in 1885 was 1694. Wigtown (constituency 219), Stranraer (788), and Whithorn (230) unite with New Galloway (60) in returning a member to parliament—the group is known as the Wigtown burghs. The value of property in Wigtownshire has been subject to some fluctuation. In the time of Charles II. lands were offered to whoever would pay the public burdens on them. With agricultural improvements and settled government, however, the value has risen pretty steadily. Valued rent in 1674, £5634; 1815, £143,425; 1856 (exclusive of royal burghs), £155,850; 1876, £222,866; 1884-85 (landward), £223,846; railways, £11,963; (in burghs), £30,391; railways, £1455. Wigtownshire ranks twenty-first among Scottish counties in point of density of population, having 79 inhabitants to the square mile—the average for the entire country being 125. Pop. (1801) 22,918, (1811) 26,891, (1821) 33,240, (1831) 36,258, (1841) 39,195, (1851) 43,389, (1861) 42,095, (1871) 38,830, and (1881) 38,611, of whom 20,468 were females, and only 28 Gaelic-speaking, though there is a strong Celtic element in the population, and Celtic names are common. Houses (1881) occupied 7440, vacant 386, building 56.

The civil county includes the 17 parishes of Glasserton, Inch, Kirkcolm, Kirkcowan, Kirkinner, Kirkmaiden, Leswalt, Mochrum, New Luce, Old Luce, Penninghame, Portpatrick, Sorbie, Stoneykirk, Stranraer, Whithorn, and Wigtown. For administrative purposes the county is divided into the Lower District, embracing the Machers and the Moors; and the Upper District, containing the Rhinns. In this sense the Rhinns are held to include the parishes of Old and New Luce, Inch, and Stranraer, besides the 5 parishes in the peninsula proper. All the parishes are assessed for the poor; and, together with Ballantrae in Ayrshire, form Wigtownshire poor-law combination, with a poorhouse at Stranraer. The Kirkcudbright and Wigtown Rifle Volunteers have their headquarters at Newton-Stewart; the Ayr, Wigtown, and Kirkcudbright Artillery Volunteers in Ayrshire. The registration county gives part of Penninghame to Kirkcudbrightshire; and in 1881 its population was 38,448.

The civil county is divided among nineteen *quoad sacra* parishes and part of another, viz., those already mentioned, with Bargrennan, Lochryan, and Sheuchan. Eleven of these are in the presbytery of Stranraer, the remainder in that of Wigtown, and all in the synod of Galloway. In 1883 there were 55 schools (49 of them public), with aggregate accommodation for 7554 children, 6262 on the registers, and an average attendance of 4537.

History.—The history of this county has already been rapidly sketched in the article on Galloway, and various points in it are also touched upon under Kirkcudbright. To these articles the reader is referred for further information. Attempts to erect western Galloway into a shrievalty seem to have been made as early as the 12th century; and in the 13th century, at the death of Alexander III., while the Baliols were lords of Galloway, it was certainly a sheriffdom. In 1341 David II. formed the county into an earldom, and conferred it upon Sir Malcolm Fleming, with a regality jurisdiction which greatly curtailed the power of the sheriff; and in 1372 this earldom, with its accompanying powers, passed into the hands of the Douglases, who were then lords of Galloway. In 1451 Andrew Agnew was confirmed as Sheriff of Wigtownshire, and for 230 years his descendants held that office without interruption. In 1681, however, it was virtually transferred to Graham of Claverhouse, for the purpose of crushing the Covenanters; but the Revolution again restored it to the family of Agnew, who held it until the abolition of hereditary jurisdictions in 1747, when £4000 was paid as compensation for its surrender. The first sheriff-

SUTHERLAND SHIRE.
NORTH SEA
Cape Wrath
Far out Head
The Whiten Head
Strathy Head
Thurso
Scrabster
Loch Laxford
Loch Inver
Loch Enard
PART OF CROMARTY SH.
Golspie
Brora
DORNOCH
DORNOCH FIRTH
Tarbat Ness
Kincardine
British Miles.
1 2 3 4 5 6 7 8 9 10
5° Longitude West from Greenwich
4°
58°

depute under the new *régime* was Alexander Boswell of Auchinleck, who afterwards rose to the bench with the title of Lord Auchinleck. Jurisdictions of regality also existed prior to 1747 over the lands respectively of the Prior of Whithorn, the Abbot of Glenluce, the Abbot of Soulseat, and the Bishop of Galloway; which passed into the hands respectively of the Earl of Galloway, Dalrymple of Stair, Agnew of Lochnaw, and the Earl of Cassillis. In 1747 compensations of £166 and £450 were paid for the two first, while nothing was paid for the others. A baronial jurisdiction over the lands of Inch, held by Dalrymple, was also abolished without compensation. Several other baronial jurisdictions had become extinct or merged in larger jurisdictions before the general abolition.

Antiquities.—Allusion has already been made under Galloway to the two towns of the Novantæ—Leucopibia and Rerigonium—which existed in this district. The early races have left a considerable number of traces of their existence in local names, as well as in the shape of sepulchral cairns, tumuli, and mounds. Standing-stones occur in several localities, as at Torhouse and Drumtroddan; and traces of forts are frequent, as for instance on the summit of Cairnpiat. Mote-hills of different dates are still extant; and many of the caves, especially in the parishes of Inch, Portpatrick, Kirkmaiden, and Glasserton, are popularly associated with early events and men in the history of the county. The chief trace of the Roman appearance in the district in 80 A.D. is the camp at Rispain near Whithorn. The Deil's Dyke, a great defensive work of the Romanised Caledonians, extended from Loch Ryan to the upper part of the Solway Firth, and has left some vestiges in the county. Castles, fortalices, and other fortifications of various dates—from that of the Romanised Caledonians to the close of the feudal period—were very numerous; and their remains are still found in all stages of decay, though many, like Wigtown Castle, have completely vanished. Among those that still linger may be mentioned Auchness, Baldoon, Carscreugh, Claynurd, Corsewall, Crosswell, Cruggleton, Dornal, Dunskey, Eggerness, Feather, Galdenoch, Garthland, Kennedy, Killessar, Lochmaberry, Lochnaw, Long, Mochrum, Myrtoun, Physgill, Sorbie, Stewart, and Synniness. Several of these are separately noticed. The castles on the sea-coast have mostly crumbled very much into decay. Different accounts of their origin are given, some authorities being of opinion that they were defences against the Scandinavian descents, others holding that they were erected by the Scandinavian rovers themselves. The chief monastic institutions in the county in Roman Catholic times were Whithorn Priory, Glenluce Abbey, Soulseat Abbey, and Wigtown Priory. There are several ruined chapels of interest in the shire, as for example those of Kirkmadrine in Sorbie, and at Kirkmaiden.

In addition to the authorities under Galloway and Kirkcudbrightshire, see W. M'Ilwraith's *The Visitor's Guide to Wigtownshire* (2d ed., Dumfries, 1877).

Wilkiestown, a post-office hamlet in Kirknewton parish, Edinburghshire, 3 miles E by N of Midcalder.

William, Fort, a small town in Kilmallie parish, Inverness-shire, near the head of salt-water Loch Linnhe and the southern end of the Caledonian Canal, in the mouth of Glen Nevis, 66 miles SSW of Inverness, 35 NNE of Oban, 50 WSW of Kingussie, and 134 NW of Edinburgh. A fortress, built here by General Monk in 1655, during Cromwell's protectorate, from a neighbouring castle took the name of the Garrison of Inverlochy, and had accommodation for 2000 men. But it was chiefly earth-built, and altogether of a temporary character, so that General Mackay in July 1690 replaced it with the present smaller stone structure, and renamed it Fort William, after William III. An irregular work of a triangular form, with ditch, glacis, and ravelin, a bomb-proof magazine, two bastions mounting 15 twelve-pounders, and accommodation for 104 men, this fort was sold by Government about 1860 to Mrs Cameron Campbell of Monzie, and is now dismantled. At it the Glencoe murderers divided their spoil; and in the spring of 1746 it was vainly bombarded by the Jacobites under Brigadier Stapleton. The town itself bore the name first of Gordonsburgh, from being built on the property of the Gordons, and then of Maryburgh, after King William's consort. It chiefly consists of three parallel lines of buildings, forming two streets, and containing several good hotels and shops, whilst in the suburbs are a number of handsome villas. A favourite tourist resort, and the headquarters of one of the twenty-six Scottish fishery districts, Fort William has a post office, with money order, savings' bank, and telegraph departments, branches of the Bank of Scotland and the British Linen Company and National Banks, 9 insurance agencies, 6 hotels, a gas company, a public hall, a new courthouse, a police station, a substantial stone quay (1834), a masonic lodge, a volunteer corps, a hospital founded by Andrew Belford, Esq. of Glenfintaig, for the poor of Kilmallie and Kilmonivaig parishes, and fairs on the fourth Wednesday of March, the second Wednesday of June and November, the Tuesday after the second Thursday of July, and the Tuesday fortnight before Falkirk October Tryst. A new church and manse for Duncansburgh *quoad sacra* parish were built at Fort William in 1881 at a cost of £5000; but the great ornament of the place is St Andrew's Episcopal church (1880-81), an Early French Gothic structure, with tower and spire, a chime of three bells, stained windows throughout, and all its fittings of the most sumptuous description. The Roman Catholic church of the Immaculate Conception was built in 1868, and there is also a Free church. The public school, accommodating 306 pupils, and built at a cost of £3000, was opened in 1876; and the Episcopal and Roman Catholic schools are likewise handsome and recent erections. In or near the town are monuments to Wm. Kennedy, M.D., Capt. Peter Cameron, and Ewen Maclachlan, the Gaelic poet and scholar. Fort William was made into a police burgh in 1874, and is the seat of a sheriff court every Thursday during session. Pop. (1841) 1026, (1861) 1104, (1871) 1212, (1881) 1594, of whom 829 were females. Houses (1881) 333 inhabited, 9 vacant, 3 building.—*Ord. Sur.*, sh. 53, 1877.

William, Port. See Port-William.

Wilsontown, a mining village in Carnwath parish, E Lanarkshire, on Mouse Water, 2 miles below its source, and on the road from Lanark to West Calder. By road it is 8¾ miles NNE of Lanark, 6 SE of Shotts Ironworks, and 6 NNE of Carnwath village; whilst by a branch line of the Caledonian, formed under an act of 1859, it is 2⅝ miles WNW of Auchengray Junction and 8½ N of Carstairs. Founded in 1779 by two brothers of the name of Wilson for the manufacture of pig-iron, it throve for a time so well that in 1807 its works supported upwards of 2000 persons, with aggregate wages of fully £3000 per month. They were closed, however, from 1812 to 1821, when they were for some years resumed, but on a very diminished scale, by Mr Dixon of Calder Ironworks; and coal mining is now the staple industry. The sculptor, James Fillans (1808-52), was a native. Pop. (1841) 113, (1871) 585, (1881) 808.—*Ord. Sur.*, sh. 23, 1865.

Wilton, a parish of Upper Teviotdale, Roxburghshire, containing, on the left bank of the river Teviot, the thriving Wilton or north-western suburb of the parliamentary burgh of Hawick. It is bounded NW by Ashkirk and Lilliesleaf, NE by Minto, SE by Cavers and Hawick, and SW by Hawick and Roberton. Its utmost length, from NE to SW, is 5⅝ miles; its utmost breadth is 3¼ miles; and its area is 8820 acres, of which 59⅜ are water. Borthwick Water runs 1⅛ mile east-by-southward along the south-western boundary to the Teviot, which itself flows 5⅞ miles north-eastward along or close to all the south-eastern boundary. Where it quits this parish, near Hassendeanburn, the surface declines to 380 feet above sea-level, and thence it rises to 586 feet near Burnhead, 840 at Heip Hill, 880 at Borthaugh Hill, 926 at Wiltonburn Hill, and 1043 at Drinkston Hill. The haughs and hill-screens which recede from the Teviot are everywhere beautiful; and

part of them, a little S of the middle, forms the larger section of the fine hill-locked landscape of Hawick's environs. Though the interior is all hilly, the heights are broad-based, and gentle in ascent; and they generally admit the dominion of the plough, and become pastoral only towards the north-western boundary. About two-thirds of the entire area are in tillage; and most of the other third, though now in permanent pasture, has been at one time cultivated. About 100 acres are covered with plantation. Silurian rocks predominate; and the soil, which ranges from alluvium to shallow earth, is mostly fertile. Principal residences are Briery Yards, Bucklands, Sillerbithall, Stirches, and Wilton Lodge; and 6 proprietors hold each an annual value of £500 and upwards. Wilton is in the presbytery of Jedburgh and the synod of Merse and Teviotdale; the living is worth £760. A very handsome new parish church, Early English in style, and containing 950 sittings, was opened in 1861. Its predecessor, built in 1762, after extensive repairs and alterations, is now used as a mission hall. Some years before 1736 one of the earliest Sunday schools in Scotland was started by the minister, Mr William Crawford (1676-1742), who was author of *Dying Thoughts*. Three public schools—Clarilaw, Dean, and Stouslie—with respective accommodation for 65, 50, and 67 children, had (1884) an average attendance of 53, 40, and 28, and grants of £44, £28, 7s., and £35. Landward valuation (1884) £9613, 18s. 7d. Pop. of entire parish (1801) 1307, (1831) 1870, (1861) 3357, (1871) 3936, (1881) 5782; of portion in parliamentary burgh (1861) 1162, (1871) 2986, (1881) 4848.—*Ord. Sur.*, sh. 17, 1864.

Winchburgh, a village in Kirkliston parish, Linlithgowshire, 11¾ miles W of Edinburgh. It has a station on the North British railway and a post office, with money order, savings' bank, and telegraph departments.

Windygates, a village in Markinch parish, Fife, ¼ mile N of Cameron Bridge station. It has a post office, with money order, savings' bank, and telegraph departments. Pop., with Cameron Bridge, (1871) 420, (1881) 410.—*Ord. Sur.*, sh. 40, 1867.

Winton Castle, a mansion in Pencaitland parish, Haddingtonshire, on the left bank of Tyne Water, in a large and finely-wooded park, near Winton station on the Macmerry branch of the North British railway, and 3 miles SE of Tranent. Built by the third Earl of Winton in 1620, it is a striking architectural structure, 'in many respects a work of original genius,' and, though following the Tudor style in its stacks of columned chimneys and in the decorated architraves of its windows, is quite distinguishable from that era. Additions made about 1805 in the English Baronial style were destroyed by fire on 7 May 1881, the damage being estimated at over £7000. In the interior the fretted ceilings of the drawing-room and 'King Charles's room' are worthy of special notice. The Winton estates, forfeited by the fifth Earl of Winton in 1716, were sold to the York Buildings Company, and on its failure part of the property, including Winton Castle, was acquired by James Hamilton, Lord Pencaitland, whose great-great-granddaughter, Mary Campbell, in 1813 married James, sixth Lord Ruthven (1777-1853), and died in 1885. She held 2875 acres in the shire, valued at £4663 per annum.—*Ord. Sur.*, sh. 33, 1863. See Seton; vol. iv. of Billings' *Baronial Antiquities* (1852); and vol. ii. of John Small's *Castles and Mansions of the Lothians* (1883).

Wishaw, a town in Cambusnethan and Dalziel parishes, Lanarkshire, constituted a police burgh in 1855, and extended in 1874 so as to comprise Wishaw proper, Cambusnethan village, and Craigneuk village. Wishaw, standing 420 feet above sea-level, within 2 miles of the Clyde's right bank, and ½ mile S of South Calder Water, has a station on a section (1880) of the Caledonian, constructed at a cost of £150,000, and extending 6 miles north-westward from Law Junction to Carfin. It is 3¼ miles ESE of Motherwell, 5 E of Hamilton, 15 ESE of Glasgow, and 32 WSW of Edinburgh. Laid out in 1794, and pleasantly situated on the SW face of a hill, it was so late as 1840 merely a large village, but since has grown rapidly to the dimensions of a considerable though straggling town, and is the centre of a vast mineral trade. It has a post office, with money order, savings' bank, and telegraph departments, branches of the British Linen Co., Clydesdale, Commercial, and Royal Banks, 24 insurance agencies, 3 hotels, gasworks, a town-hall, a public library, a public park, a Saturday Liberal newspaper, the *Wishaw Press* (1876), fairs on the second Thursday of May and the fourth Thursday of October, etc. The Established Church has four places of worship, the Free Church two, the United Presbyterian two; and there are also Reformed Presbyterian, Primitive Methodist, Evangelical Union, Baptist, and Roman Catholic churches. Of schools there are nine, six of them under the school board. Few Scottish towns have grown more rapidly than Wishaw, such growth being due to the great extension of its mineral industries. These, at the census of 1881, employed 2294 of the 3670 persons here of the 'industrial class'—1687 being engaged in coal-mining, 332 in the iron manufacture, etc. The burgh is governed by a chief and two junior magistrates and by nine police commissioners. A sheriff small debt court is held on every third Thursday, and a police court on every Monday, or as occasion requires. Municipal voters (1885) 1714. Valuation (1858) £8740, (1882) £23,800, (1885) £26,500. Pop. of Wishaw proper (1841) 2149, (1851) 3271, (1861) 6112, (1871) 8812, (1881) 8953; of extended police burgh (1881) 13,112, of whom 6929 were males, and 1829 were in Cambusnethan, 2330 in Craigneuk. Houses in burgh (1881) 2532 inhabited, 369 vacant, 12 building.—*Ord. Sur.*, sh. 23, 1865.

Wishaw House, a mansion in Cambusnethan parish, Lanarkshire, near the left bank of South Calder Water, 1¼ mile NNW of Wishaw. It is a castellated edifice, enlarged and improved, from designs by Gillespie Graham, not long before 1839. Its owner, James Hamilton (b. 1822), in 1875 established his claim to the title of ninth Lord Belhaven (cre. 1647).

Wisp Hill. See Ewes.

Wiston and Roberton, a united parish of the Upper Ward of Lanarkshire, in the E containing Lamington station, on the Caledonian railway, and near the left bank of the Clyde, 3½ miles SSW of Symington Junction, 10¼ S by E of Carstairs Junction, and 37¾ SW by S of Edinburgh. Formed in 1772 by the union of the two ancient parishes of Wiston to the N and Roberton to the S, it is bounded NW and N by Carmichael, NE by Symington, E and SE by Lamington, S and SW by Crawfordjohn, and W by Douglas. Its utmost length, from N to S, is 5¼ miles; its breadth increases northward from 1⅛ to 5⅛ miles; and its area is 13,209·781 acres, of which 70·005 are water. The Clyde flows 5¾ miles north-north-eastward along or close to all the Lamington border, and Duneaton Water 1⅛ mile eastward along all the southern boundary. Other affluents of the Clyde here are Roberton Burn, running through the middle of Roberton, and Garf Water, through the middle of Wiston. Along the Clyde the surface sinks to 690 feet above sea-level; and thence it rises to 1169 at Harten Hill, 1237 at Roberton Law, 1675 at Dungavel Hill, and 2335 at Tinto, which culminates on the meeting-point of Wiston, Carmichael, Covington, and Symington parishes. The rocks are variously eruptive, Silurian, Devonian, and carboniferous. The eruptive rocks occur partly in dikes through the stratified rocks, partly in vast amorphous masses, of great variety of character, in the uplands. Limestone has been largely quarried; but workable coal has been sought for in vain. Much of the soil is very marshy; great part is either black loam or gravelly earth; and the rest is very diversified. According to the Ordnance Survey, 4606 acres are arable, 317 under wood, and 7976 heathy pasture. The township of Roberton was founded by Robert, the brother of Lambin, in the early part, and the township of Wiston by Wice about the middle, of the 12th century. Hardington House, noticed separately, is the chief residence; and 5 proprietors

hold each an annual value of more, 3 of less, than £500. The parish is in the presbytery of Lanark and the synod of Glasgow and Ayr; the living is worth £280. The parish church stands near the left bank of Garf Water, ¼ mile E of Wiston hamlet, 1⅛ mile NW of Lamington station, and 7 miles SSW of the post-town, Biggar. It is an old building, enlarged after the union of the two parishes, and containing 355 sittings. At Roberton village, 2½ miles SSW, is a U.P. church, dating from 1801, and rebuilt in 1873; whilst two public schools, Wiston and Roberton, with respective accommodation for 70 and 50 children, had (1884) an average attendance of 18 and 28, and grants of £27 and £43, 14s. Valuation (1859) £4964, 14s. 11d., (1885) £8656, 18s. Pop. (1801) 757, (1831) 940, (1861) 786, (1871) 680, (1881) 562.—*Ord. Sur.*, shs. 23, 15, 1865-64.

Wolfelee, a mansion in Southdean parish, Roxburghshire, on the right bank of Rule Water, 10 miles ESE of Hawick. Its owner, Sir Walter Elliot, K.C.S.I., F.R.S. (b. 1803; suc. 1855; cre. 1866), holds 3030 acres in the shire, valued at £2284 per annum. See Hobkirk.—*Ord. Sur.*, sh. 17, 1864.

Wolfhill, a village at the mutual border of Cargill and St Martins parishes, Perthshire, 6 miles NNE of Perth.

Woodburn, a modern mansion in the N of Newbattle parish, Edinburghshire, near the South Esk's right bank, 1 mile E of Dalkeith. It was recently purchased by the Marquess of Lothian.

Woodcot. See Fala and Soutra.

Woodend, a village in Newhills parish, Aberdeenshire, near the right bank of the Don, 1 mile N by W of Auchmull. Pop. (1871) 486, (1881) 529. See Stoneywood.

Woodend, a village in Torphichen parish, Linlithgowshire, 1½ mile WNW of Armadale.

Woodend, a mansion in Madderty parish, Perthshire, 1¼ mile W by S of Madderty station.

Wooden House, a mansion in Kelso parish, Roxburghshire, 1¾ mile E by S of the town.

Woodhall, a mansion in Colinton parish, Edinburghshire, on the right bank of the Water of Leith, opposite Juniper Green. The estate was possessed by the Cunninghams for more than three centuries prior to 1701, when it was purchased by Sir John Foulis. See Millburn Tower.

Woodhall. See Balmaghie.

Woodhaven, a village in Forgan parish, Fife, on the Firth of Tay, opposite Dundee, and 1 mile SW of Newport.

Woodhead. See Fyvie and Carsphairn.

Woodhill, a mansion in Kirkmichael parish, Perthshire, near the right bank of the Ardle, 10 miles NNW of Blairgowrie.

Woodhill House, a mansion in Barry parish, Forfarshire, 4 miles W of Carnoustie.

Woodhouse. See Kirkpatrick-Fleming.

Woodhouselee, a mansion in Glencorse parish, Edinburghshire, 6½ miles S of Edinburgh and 4 N of Penicuik. Romantically seated on the eastern slope of the Pentland Hills, it is an irregular pile of different dates, and partly occupies the site of the 14th-century fortalice of Fulford or Foulfourde, at whose demolition in 1755 only a stone vaulted room was suffered to remain as the lower story of part of the new building. Its square corner tower was built in 1796, and its S wing in 1843, the latter from plans by Kemp, the architect of the Scott Monument at Edinburgh. There is a good collection of family portraits and other paintings, and the grounds contain some fine old trees. The estate was purchased in 1748 by William Tytler, W.S. (1711-92), Queen Mary's vindicator, and passed to his son, Alexander Fraser-Tytler, Lord Woodhouselee (1747-1813), author of *Elements of History*, etc., and father of the Scottish historian, Patrick Fraser-Tytler (1791-1849). The present proprietor, James Stuart Fraser-Tytler, Esq. (b. 1820; suc. 1862), holds 556 acres in the shire, valued at £955 per annum. Old Woodhouselee—the 'haunted Woodhouselee' of Scott's *Grey Brother*—stood at the SE verge of the parish, on the North Esk's left bank, near Auchindinny. It belonged to the wife of James Hamilton or 'Bothwellhaugh,' but, according to tradition, was forfeited to enrich a greedy minion of the Regent Murray, who drove her forth on a winter's night, with her new-born babe, to die on the bleak hillside. Hence Bothwellhaugh's murder of Murray at Linlithgow (1570) has been popularly regarded as a deed of retribution; but Dr Hill Burton has shown that the so-called 'victim of the Pentland Hills' obtained restitution of Woodhouselee as late as 1609. A considerable portion of the present mansion was built with the stones of Old Woodhouselee.—*Ord. Sur.*, sh. 32, 1857. See Jn. Small's *Castles and Mansions of the Lothians* (Edinb. 1883).

Woodielee. See Lenzie.

Woodside, a police burgh in Old Machar parish, Aberdeenshire, near the right bank of the Don, 2 miles NNW of the centre of Aberdeen, and included within its parliamentary boundary. It has a post office, with money order, savings' bank, and telegraph departments, a station on the Great North of Scotland railway, a branch of the Aberdeen Town and County Bank (1880), extensive paper works, a valuable free library (1881), the gift of Sir John Anderson, a large public school, an Established church (1846; made *quoad sacra* 1862), a Free church, a U.P. church (1879), a Congregational church, and St Joseph's Roman Catholic church (1842). Pop. (1871) 4290, (1881) 5452; of *q. s.* parish (1881) 5928.—*Ord. Sur.*, sh. 77, 1873.

Woodside. See Burrelton.

Woodside, a mansion in the parish and near the town of Beith, Ayrshire. An old edifice, enlarged and modernised in the latter half of the 18th century, and again in 1848, it was a seat of the Ralstons from 1551 till 1772, and in 1834 was purchased by Wm. Patrick, Esq. See Ladyland.—*Ord. Sur.*, sh. 22, 1865. See A. H. Millar's *Castles and Mansions of Ayrshire* (Edinb. 1885).

Woodside, a hamlet in Largo parish, Fife, 3¼ miles N of the town.

Woodville, a mansion in Colinton parish, Edinburghshire, ½ mile SW of Colinton village. It was the home, from 1831, of the Rev. Arch. Alison (1757-1831), author of *Essays on Taste;* and at it died his eldest son, Professor Wm. Pulteney Alison (1790-1859).—*Ord. Sur.*, sh. 32, 1857.

Woodville, a mansion in St Vigeans parish, Forfarshire, 2¼ miles NW of Arbroath.

Woolmet. See Newton.

Wooplaw, an estate, with a modern mansion and fine plantations, in Melrose parish, Roxburghshire, on the W side of Allan Water, 5½ miles SSW of Lauder.

Wormistone House, a fine old mansion in Crail parish, East Neuk of Fife, 1½ mile N of the town. Acquired by his ancestor about the beginning of the 17th century, it is the seat of David Clark Lindsay, Esq. (b. 1832; suc. 1872), who holds 501 acres in the shire, valued at £1542 per annum, and who is heir present to the earldom of Lindsay. See Kilconquhar.—*Ord. Sur.*, sh. 41, 1857.

Wrath, Cape. See Cape Wrath.

Wyseby, a mansion in Kirkpatrick-Fleming parish, Dumfriesshire, near the left bank of Kirtle Water, 1¼ mile SE of Kirtlebridge station.

Y

Yair, a mansion, with beautiful grounds, in Selkirk parish, Selkirkshire, on the right bank of the Tweed, 5 miles NNW of the town of Selkirk. It was built towards the close of the 18th century by Alex. Pringle of Whytbank, Scott's neighbour at Ashiesteel (*cf.* Introd. to Canto II. of *Marmion*). His grandson, Alex. Pringle, Esq. (b. 1837; suc. 1857), is male representative of the original Pringle stock, and holds 3397 acres, valued at £1792 per annum.—*Ord. Sur.*, sh. 25, 1865.

Yarrow, a parish of Selkirkshire, whose church stands on the left bank of Yarrow Water, 9 miles W by S of Selkirk, under which there is a post office of Yarrow. It is bounded N by Peebles, Traquair, Innerleithen, and Stow, E by Selkirk, SE by Kirkhope, S by Ettrick, and W by Megget and Manor. Its utmost length, from NE to SW, is 16 miles; its utmost breadth is 7½ miles; and its area is 65⅝ square miles or 41,856 acres, of which 813 are water, and 2166½ belong to a detached portion (4⅛ × 1¼ mile), surrounded by Peebles, Traquair, and Innerleithen. St Mary's Loch (3 × ½ mile; 814 feet above sea-level) lies to the SW, on the Ettrick and Megget boundary; and, issuing from its foot, Yarrow Water flows 11⅛ miles east-north-eastward (for the last 2¾ along the Selkirk boundary), till it passes off, near Broadmeadows, into Selkirk parish. At Old Howford the Tweed flows ¼ mile east-south-eastward along all the Innerleithen boundary of the detached section; and, lower down, it flows 4 miles east-south-eastward, past Elibank and Ashiesteel, along all the Innerleithen and Stow boundary of the main body. Beside Yarrow Water the surface declines to 585, beside the Tweed to 397, feet above the sea; and chief elevations to the N of the Yarrow, as one goes up the vale, are Elibank Craig (969), Ashiesteel Hill (1314), *Elibank Law (1715), Brown Knowe (1718), Plora Craig (1212), *Minchmuir (1856), Blackgrain Rig (1652), Snouthead (1483), Mountbenger Hope (1784), Ward Law (1377), *Dun Rig (2433), *Blackhouse Heights (2213), and *Black Law (2285), where asterisks mark those summits that culminate on the confines of the parish. To the S of the Yarrow rise *Crook Hill (1580 feet), *Sundhope Height (1684), *Black Knowe Head (1806), *Turner Cleuch Law (1809), Peat Law (1737), Bowerhope Law (1570), and the Wiss (1932); whilst in the detached section the highest point is *Birkscairn Hill (2169). Except along the Tweed and the lower reaches of Yarrow Water the parish is almost treeless, though once it was all included in Ettrick Forest. Now far the greater part of it is sheepwalks. Its endless memories, richer than those of any other parish, are recorded under Altrive, Ashiesteel, Blackhouse, Douglas, Dryhope, Elibank, Hangingshaw, Mount Benger, St Mary's Loch, and Yarrow Water. Here, however, may be noticed the 'Yarrow Doctor,' John Rutherford, M.D. (1695-1779), whose father was parish minister, and who held the professorship of medicine in Edinburgh University from 1726 till 1765. Five proprietors hold each an annual value of more, and three of less, than £500. Giving off a portion to Caddonfoot *quoad sacra* parish, Yarrow is in the presbytery of Selkirk and the synod of Merse and Teviotdale; the living is worth £418. Its ancient name was St Mary's or St Mary's of the Lowes (*de Lacubus*), and a pre-Reformation chapel stood at Deuchar or Duchoire, a little way NE of the present church. Kirkhope was disjoined from it in 1851. The parish church, built in 1640, contains 430 sittings, and in 1884 was adorned with two beautiful stained-glass windows, one on each side of the pulpit, in memory of the late Rev. Dr Russell and his father, both ministers of Yarrow. The subjects are 'Christ blessing little children' and the 'Resurrection.' Two public schools, Yarrow and Yarrowford, with respective accommodation for 91 and 45 children, had (1884) an average attendance of 60 and 16, and grants of £77, 16s. and £26, 15s. Valuation (1865) £9964, 6s. 5d., (1885) £13,140, 10s. Pop. (1861) 643, (1871) 662, (1881) 639, of whom 562 were in the ecclesiastical parish.—*Ord. Sur.*, shs. 24, 16, 25, 17, 1864-65.

Yarrow Water, a stream of Selkirkshire, issuing from the foot of St Mary's Loch, and flowing 14½ miles east-north-eastward, through Yarrow and Selkirk parishes, till, after a descent of 405 feet, it falls into Ettrick Water at a point 2 miles SW of Selkirk town. It is a capital trouting-stream, the fish weighing from 1½ lb. downwards; and its waters above Broadmeadows are open to the public.

> 'What's Yarrow but a river bare,
> That glides the dark hills under?
> There are a thousand such elsewhere
> As worthy of your wonder.'

So Wordsworth lightly sang in the first of his 'Three Yarrows'—*Yarrow Unvisited* (1803), *Yarrow Visited* (1814), and *Yarrow Revisited* (1831). On the first occasion, he and his sister Dorothy had just left Scott, and were to meet him again next day at Melrose; on the second, the 'Ettrick Shepherd' guided him over the hills from Traquair to St Mary's Loch, and thence down the whole course of Yarrow to its union with the Ettrick; on the third, he drove with Scott from Abbotsford to Newark Castle—they were both over sixty years old, and Scott was in two days to leave for Italy. Then there is Foulshiels, the birthplace of Mungo Park, and the Yarrow's deep pool where Scott found him plunging one stone after another into the water, and anxiously watching the bubbles that rose to the surface. 'This appears,' said Scott, 'but an idle amusement for one who has seen so much adventure.' 'Not so idle, perhaps, as you suppose,' answered Mungo, 'this was the way I used to ascertain the depth of a river in Africa.' He was then meditating his second and last journey, but had told no one. Carterhaugh, scene of the ballad of *Young Tamlane*, 'sweet Bowhill' and Newark Castle, Philiphaugh, where Leslie routed Montrose, and Hangingshaw, erst a stronghold of the 'OutlawMurray'—these all are set amid the lower vale's

> 'Rich groves of lofty stature,
> With Yarrow winding through the pomp
> Of cultivated nature.'

But the very Yarrow, the Yarrow of mournful song, is that of the upper valley, where the 'deep, swirling stream, *fabulosus* as ever Hydaspes,' laves 'the inner sanctuary of the whole Scottish Border, of that mountain tract which sweeps from sea to sea, from St Abbs Head and the Lammermuir westward to the hills of Galloway. It concentrates in itself all that is most characteristic of that scenery—the soft green rounded hills with their flowing outlines, overlapping and melting into each other; the clear streams winding down between them from side to side, margined with green slips of holm; the steep brae-sides with the splendour of mountain grass, interlaced here and there with darker ferns, or purple heather; the hundred sideburns that feed the main Dale river, coming from hidden Hopes where the grey peel-tower still moulders; the pensive aspect of the whole region so solitary and desolate. Then Yarrow is the centre of the once famous but now vanished Forest of Ettrick, with its memories of proud huntings and chivalry, of glamourie and the land of Faery. Again, it is the home of some "old unhappy far-off thing," some immemorial romantic sorrow, so remote that tradition has forgotten its incidents, yet cannot forget the impression of its sadness. Ballad after ballad comes down loaded with a dirge-like wail for some sad event, made still sadder for that it befell in Yarrow.' The oldest surviving ballad, *The Dowie Dens o' Yarrow*, is supposed to refer to a combat at Deuchar Swire, near Yarrow kirk, in which

Walter Scott, third son of Robert of Thirlestane, was treacherously slain by his brother-in-law, John Scott of Tushielaw:—

'As he gaed up the Tinnies Bank,
I wot he gaed wi' sorrow,
Till, down in a den, he spied nine armed men,
On the dowie houms of Yarrow.

'Four has he hurt, and five has slain,
On the bludie braes of Yarrow,
Till that stubborn knight came him behind,
And ran his body thorough.'

Then comes his Sarah's exquisite lament:

'"Yestreen I dreamed a dolefu' dream;
I fear there will be sorrow!
I dreamed I pu'd the heather green,
Wi' my true love on Yarrow.

'"O gentle wind that bloweth south,
From where my Love repaireth,
Convey a kiss frae his dear mouth,
And tell me how he fareth!

'"Oh! tell sweet Willie to come down,
And hear the mavis singing,
And see the birds on ilka bush,
And leaves around them hinging.

'"But in the glen strove arméd men;
They've wrought me dule and sorrow;
They've slain—the comeliest knight they've slain—
He bleeding lies on Yarrow."

'She kissed his cheek, she kaimed his hair,
She searched his wounds all thorough;
She kissed them, till her lips grew red,
On the dowie houms of Yarrow.'

We hear the same sad burden of a lover lost, by drowning in Yarrow or by a rival's sword, in *Willie's rare, and Willie's fair* (*circa* 1525; first printed 1724), in Hamilton of Bangour's *Busk ye, busk ye, my bonny, bonny bride* (1748), and in John Logan's *Braes of Yarrow* (1770), two of whose verses Scott deemed the perfection of poetry:

'His mother from the window looked,
With all the longing of a mother;
His little sister weeping walked
The green-wood path to meet her brother;

'They sought him east, they sought him west,
They sought him all the forest thorough;
They only saw the cloud of night,
They only heard the roar of Yarrow!'

Scott himself and the 'Ettrick Shepherd,' 'Christopher North' and Henry Scott Riddell, the 'Surfaceman Poet' and 'J. B. Selkirk,' have added each a spray to Yarrow's garland of song; but we will end with Wordsworth's closing stanza:

'Flow on for ever, Yarrow Stream!
Fulfil thy pensive duty,
Well pleased that future Bards should chant
For simple hearts thy beauty;
To dream-light dear while yet unseen,
Dear to the common sunshine,
And dearer still, as now I feel,
To memory's shadowy moonshine.'

See Sir Thomas Dick Lauder's *Scottish Rivers* (Edinb. 1874); Dr John Brown's *Minchmoor* (Edinb. 1864); Prof. Jn. Veitch's *History and Poetry of the Scottish Border* (Glasg. 1878); and Principal J. C. Shairp's 'Three Yarrows' in *Aspects of Poetry* (Oxf. 1881).—*Ord. Sur.*, shs. 16, 24, 25, 1864-65.

Yeildshields. See ROADMEETINGS.

Yell (anc. *Jalla, Jala;* Icel. *gelld, gall,* 'barren'), the second largest of the Shetland Islands, and, except Unst, the most northerly of the group, lies 25 to 40 miles N of Lerwick, under which it has post and telegraph offices of Ulsta (in the SW), Mid Yell (E), and Cullivoe (NE). It is separated, on the W and SW, from Mainland by Yell Sound, 1¾ to 6 miles broad; on the E, from Fetlar by Colgrave Sound, 1¾ to 4½ miles broad; and on the NE, from Unst by Bluemull Sound, 4½ furlongs broad at the narrowest. Its utmost length, from N to S, is 17¼ miles; its breadth varies between ½ mile and 6½ miles; and its area is 81·69 square miles or 52,923 acres. The tides on both sides of the island are very impetuous; and, both in Yell and Bluemull Sounds, where they meet with obstructions, and often run at the rate of 9 or 10 miles, they for continuous hours defy boat navigation, and toss the sea, even during a calm, into foam and tumult. The chief bays which indent the coast are Gloup Voe on the N; Basta Voe, Mid Yell Voe, and Otters Wick on the E; Burra Voe and Hamna Voe on the S; and Whale Firth on the W. All these, and some smaller bays or creeks, form natural harbours, several of which are capacious and sheltered. Mid Yell Voe and Whale Firth are opposite each other, a little N of the centre of the island, and leave between them only a low boggy isthmus ½ mile across, which could be cut into a canal communication. A landing can be effected at almost any point on the E coast; but even in calm weather it can nowhere be effected on the W except in Whale Firth and one smaller creek. The coast, along the E, is generally low and often sandy; but along the W it is to a considerable extent rocky, bold, and even precipitous, rising rapidly in places to over 200 and 300 feet. The surface of the island presents a heavy and cheerless aspect. Two nearly parallel ridges of gneiss rocks, of almost uniform outline, and only from 200 to 600 feet in height, traverse it nearly from end to end, sloping gradually toward the shores, and, in some places, connected by transverse ridges running from E to W. The northern division of the island at no point exceeds 382 feet above sea-level; but S of Whale Firth and Mid Yell Sound rise the South Ward of Reafirth (615 feet), the Kame of Sandwick (531), and the Ward of Otterswick (672). Of sixty-six little fresh-water lochs or lochlets, most of them yielding good trout-fishing, the largest are Kettlester Loch, Lumbister Loch, Colvister Loch, and Gossa Water. The rocks are principally gneiss and mica slate, with veins of granite and nodules or masses of quartz and trap; and almost all the soil is a deep moss, occasionally but seldom mixed with clay or sand. Yell is described in Buchanan's History (1582) as 'so uncouth a place that no creature can live therein except such as are born there.' But now there are a number of good sheep farms, with thriving flocks of Cheviot and blackfaced sheep. Eggs, cattle, and ponies are also exported; fishing in the surrounding seas is a leading but perilous employment; and the pursuit and capture of the 'caa'in whale' (*delphinus deductor*) occasionally produces vast excitement. The antiquities are some Picts' houses or circular burghs, and nearly a score of shapeless ruins or faint vestiges of pre-Reformation chapels. The island was anciently distributed into the three parishes of North Yell, Mid Yell, and South Yell. North Yell is now united to FETLAR; whilst Mid and South Yell form one civil parish, which, including the islets of Hascussay and Bigga, has a land area of 35,365 acres. In 1880 this parish was ecclesiastically redivided into Mid Yell and South Yell *quoad sacra* parish. Both are in the presbytery of Burravoe and the synod of Shetland; and the stipend of the former is £196, of the latter £129. Mid Yell church, with 500 sittings, was built in 1832; and South Yell church, with 384, in 1841. There are also a Free church of Yell and an Episcopal mission church of Burravoe; and six public schools—Burravoe, East Yell, Mid Yell, Ulsta, West Sandwick, and West Yell—with total accommodation for 296 children, had (1884) an average attendance of 157, and grants amounting to £191, 4s. Valuation of Mid and South Yell (1860) £1434, (1884) £2457, 10s. 9d. Pop. of entire island (1831) 2649, (1861) 2716, (1871) 2732, (1881) 2529, of whom 1514 were females, whilst 821 were in North Yell, 984 in Mid Yell, and 724 in South Yell.

Yester, a parish in the S of Haddingtonshire, containing GIFFORD village, within ½ mile of the northern

boundary, and 4¼ miles SSE of Haddington, under which there is a post office of Gifford, with money order, savings' bank, and telegraph departments. It is bounded N by Haddington, NE, E, and SE by Garvald, S by Lauder and Channelkirk in Berwickshire, SW by Humbie, and W and NW by Bolton. Its utmost length, from N to S, is 5⅛ miles; its utmost breadth, from E to W, is 4¼ miles; and its area is 8847¾ acres. GIFFORD WATER, entering from Garvald, winds 3¼ miles west-north-westward across the north-eastern interior and along the Haddington boundary, and receives here the tribute of Gamuelston, Newhall, and other rivulets which rise in the S of the parish. Sinking at the northern border to 345 feet above sea-level, the surface thence rises southward to 700 feet near Long-Yester, 921 near Long-Newton, and 1733 at LAMMER LAW, the loftiest of the LAMMERMUIR HILLS. The rocks of the northern district, belonging to the Carboniferous formation, include limestone and hard red sandstone, but no coal; those of the southern district are Silurian. The soil, in most parts clayey, in some parts a light loam, on the uplands is moorish, and nearly everywhere is more or less incumbent on clay. Agricultural improvements in the way of reclamation, draining, fencing, etc., have been remarkably successful. About three-fifths of the entire area are in tillage; some 940 acres are under wood, and the rest of the land is either pastoral or waste. The manor of Yester or Yestred (Cymric *ystrad*, 'strath or dale') was granted by William the Lyon (1166-1214) to Hugh Gifford, whose father, an Englishman, had settled in Lothian under David I. From that early age till the present day Yester has remained with his descendants. Sir David Dalrymple relates in his Annals, that his grandson, Hugh Gifford de Yester, died in 1267, and that in Yester Castle, which stood on the eastern verge of the parish, near the left bank of Gifford Water, 'there was a spacious cavern formed by magical art, and called in the country Bo'hall, *i.e.*, Hobgoblin Hall.' This cave, which is alluded to in Canto Third of *Marmion*, is very spacious, and has an arched roof. It is reached by a descent of 24 steps; and though it has stood for so many centuries, and has been exposed to the external air for between 100 and 200 years, it is still in a state of good preservation. From the floor, another stair of 36 steps leads down to a pit, which communicates with one of the neighbouring rivulets. A great part of the walls superincumbent on the cavernous apartment are still standing. Tradition reports that the Castle of Yester was the last fortification in this country which surrendered to the English general, sent into Scotland by the Protector Somerset. Another Hugh Gifford, who died before 11 March 1409, had not a son to inherit his large estates; and Johanna, the eldest of his daughters, marrying Sir William Hay of Locherwart, transferred the manor, with the patronage of the church, to him and their conjoint posterity. Thus arose the family of Yester and Locherwart, who obtained the titles of Lord Yester in 1488, Earl of Tweeddale in 1646, Marquis of Tweeddale and Earl of Gifford in 1694, and Baron Tweeddale (in the peerage of the United Kingdom) in 1881. William Montagu Hay, present and tenth Marquis (b. 1828; suc. 1878), holds 43,027 acres, valued at £25,832, 6s. per annum, viz., 20,486 in Haddingtonshire (£11,485, 4s.), 18,116 in Berwickshire (£9572, 3s.), and 4425 in Roxburghshire (£4774, 19s.). His seat, Yester House, stands among finely wooded grounds, near the left bank of Gifford Water, 1 mile SE of Gifford village, and is a large classical edifice, built from designs by W. Adam towards the close of last century, but greatly altered and improved since then (J. Small's *Castles and Mansions of the Lothians*, 1883). Another mansion, noticed separately, is NEWTON HALL. Robert Fleming (1630-94), a much esteemed divine, and Charles Nisbet, D.D. (1736-1804), president of Dickenson College, Pennsylvania, were natives, as also were James Craig and John Witherspoon, D.D. The two last are both noticed under GIFFORD, where, too, is discussed the question of John Knox's birthplace. In the southern or Lammermuir portion of the parish are the sites or remains of five hill-forts, one of them at a spot called the Witches' Knowe. Yester is in the presbytery of Haddington and the synod of Lothian and Tweeddale; the living is worth £455. The church was originally called St Bothan's or Bathan's, after Baithene, Columba's cousin and successor at Iona. Afterwards known as Yester's, in 1451 it was restored to its former name, and at the same time converted by Sir William Hay into a collegiate establishment for a provost, 6 prebendaries, and 2 singing-boys. The Reformation upset the collegiate establishment, and placed the church in a simply parochial position under the revived name of Yester. A chapel, dedicated to St Nicholas, and subordinate to the parish church, anciently stood at Duncanlaw. The present parish church and the new Free church are both described under Gifford. There are two public schools, one at Long-Yester, and the other, of recent erection, at Gifford. Valuation (1860) £7553, (1885) £8844, 5s. Pop. (1801) 929, (1841) 1069, (1861) 1033, (1871) 1034, (1881) 924.—*Ord. Sur.*, sh. 33, 1863.

Yetholm (12th c. *Yetham* or *Jetham*, 'hamlet at the gate or passage' between England and Scotland), a Border village and parish of NE Roxburghshire. The village, lying 378 feet above sea-level, consists of two parts—Town-Yetholm, on the left, and Kirk-Yetholm, 3 furlongs to the E, on the right, bank of Bowmont Water, which here is spanned by a stone three-arch bridge, built in 1834. Town-Yetholm is 7½ miles SE of Kelso, and Kirk-Yetholm 1⅝ mile SW of the English Border; and each is a burgh of barony, the former under Wauchope of Niddrie-Marischall, and the latter under the Marquess of Tweeddale. Of Kirk-Yetholm's two sheep-fairs (27 June and 24 Oct.), and Town-Yetholm's lamb fair (second Wednesday of July), only the first retains any importance; and a weekly market, formerly held at Town-Yetholm, has long been discontinued. The football match, too, and games on Fastern E'en (Shrove Tuesday) have lost much of their ancient celebrity; and the smuggling of whisky across the Border was almost extinct so long ago as 1835. Once it engaged a fifth of the villagers, and the whisky sold from Yetholm into England had a value of from £10,000 to £20,000 a year. There are a post office under Kelso, with money order, savings' bank, and telegraph departments, a water supply of 1858, a curling club, and a horticultural society. Pop. of entire village (1841) 944, (1861) 902, (1871) 796, (1881) 746.

Edward I. spent two days at Yetholm in 1304 on his way back to England; and Douglas is said to have made the kirk his rendezvous before the battle of Otterburn (1388); whilst many of the Scottish nobles who fell at Flodden (1513) are believed to have been brought 6 miles for burial in the kirkyard, as the nearest consecrated ground in Scotland. A later tradition tells how in 1745 a small party of Highlanders, adherents of Bonny Prince Charlie, marched through the parish and village, up Bowmont Water, to Earl in Northumberland. But Kirk-Yetholm's chief interest is that from time immemorial it has been the headquarters of the Scottish Gipsies. The date of their settlement here is as hard to fix as that of the first arrival of Gipsies in Scotland. The earliest certain mention of them within the realm is an entry in the books of the Lord High Treasurer: 'Apr. 22, 1505.—Item to the Egyptianis, be the kingis command, vij lib.;' and on 5 July of that same year James IV. gave Anthonius Gagino, Count of Little Egypt, a letter of commendation to the King of Denmark. But the 'overliers and masterful beggars,' described in an Act of 1449 as going about the country with 'horses, hundes, and uther gudes,' were probably Gipsies; and we find an early tradition of Gipsies or 'Saracens' infesting Galloway prior to 1460. (See KIRKCUDBRIGHT.) In 1540 James V. subscribed a writ in favour of 'oure louit Johnne Faw, lord and erle of Litill Egipt;' and the Faws or Faas would seem to have been the first Gipsy settlers here, some longish time before 1669, if the Falls of DUNBAR were really a branch

of the Faas of Kirk-Yetholm. Jean Gordon, again, the prototype of Scott's 'Meg Merrilees,' appears to have been a native of the place; and as she was quite an old woman when, at Carlisle, soon after the year 1746, she was ducked to death in the Eden, there must have been Gipsies in Yetholm earlier than 1695 or 1715—the dates of their first settlement, according to different authorities. Old Will Faa, the first Gipsy King that we hear of, died at Coldingham in 1783 or 1784; and 'his corpse was escorted to Yetholm by more than 300 asses.' He was succeeded by his eldest son, William; he, in 1847, by his sister's son, Charles Blythe; and he, in 1861, by his daughter, Esther Faa Blythe, who, dying at Kelso in July 1883, was buried at Yetholm in presence of a large multitude. A canny old body, but with little of the Romani in face or language, she described Kirk-Yetholm as 'sae mingle-mangle that ane micht think it was either built on a dark nicht or sawn on a windy ane—the inhabitants maistly Irish, and nane o' her seed, breed, and generation.' And she was right, for to-day in the 'Gipsy toun' there are no true Gipsies.

The parish is bounded NW, for 2⅝ miles, by Linton; NE and E, for 6⅝ miles, by Northumberland; SW and W, for 5¼ miles, by Morebattle. Its utmost length, from NNW to SSE, is 5⅝ miles; its utmost breadth, from E to W, is 3⅝ miles; and its area is 6036·220 acres, of which 76·678 are water and 38·101 roads. Bowmont Water, coming in from Morebattle, flows 3 miles north-north-eastward through Yetholm parish, till, 1¾ mile below the bridge, it passes into Northumberland, to fall into the Till at the field of Flodden. Yetholm or Primside Loch (3⅓ × 1½ furl.; 41·786 acres) lies on the Morebattle boundary, 1 mile W of Town-Yetholm, and sends off the ditch-like Stank 1¾ mile east-north-eastward to Bowmont Water, another of whose little affluents, Halter or Shotton Burn, rises in the SE extremity of the parish, and runs 4⅜ miles north-by-westward, for the last ¾ mile along the English Border. The Bowmont is a capital trout-stream, and Yetholm Loch contains pike and plenty of perch. Beside the Bowmont the surface declines to from 400 to 295 feet above sea-level, and thence it rises westward to 760 feet on Yetholm Law and 881 on Venchen Hill, south-eastward and eastward to 1086 on Staerough Hill, 1629 on Steerrig Knowe at the SE extremity of the parish, 1407 on White Law, and 937 on Green Humbleton. New red sandstone is the predominant rock of the lower grounds, felspar-porphyry of the hills; and the latter contains nodules of agate and common jasper. Quartz and compact felspar also occur; and a fine sharp sand, suitable for the purposes of the mason, forms much of the bed of the Bowmont. The soil of the arable lands is generally good, in places of considerable depth, and largely incumbent on gravel. 'The parish of Yetholm,' says Dr Baird, 'is prettily situated at the foot of the smooth green Cheviots. It comprises part of the hill-locked and lovely vale of the Bowmont, "alike inaccessible from without, and not to be left from within,"—a little sunny world of its own. In summer the Bowmont meanders quietly through its channelly bed, at times and in places lost altogether among the gravel; but in the winter season, and in times of flood, it runs with a very rapid stream, and occasionally bursts its barriers and overflows the whole haugh, carrying everything before it. Yetholm in many respects was long neglected. It possesses natural beauties of its own; but little had been done by the proprietors, most of whom were non-resident, to improve the appearance of their estates. The farms were well cultivated; but the hills were bare of wood, and no attempts had been made to diversify the scenery or improve the ground by ornamental plantation. About 1830, however, better taste began to be shown. Mr Wauchope commenced planting trees on the hill-sides on his property; the Marquess of Tweeddale was not altogether wanting on his part; while the gardens and plantations about Cherrytrees showed that that estate had fallen into the hands of a man of good taste and skill in ornamental landscape gardening. A casual visitor to Yetholm at the present day cannot fail to observe that there are few parishes in the S of Scotland superior to it in richness of cultivation and taste in planting, as well as in sweetness of scenery and freshness and invigorating healthfulness of air.' There are remains of three or four ancient hill-forts; but Thirlstane Tower has been many years pulled down. Its 'warlock's room' was probably the laboratory of Dr Scott, a chemist of some celebrity, and physician to Charles II. Cherrytrees, 1¼ mile NW of the village, is the seat of John Brack Boyd, Esq. (b. 1818; suc. 1862), the only resident heritor, who holds property in the parish of £900 value per annum. The other proprietors are Wauchope of Niddrie-Marischall (£3200), the Marquess of Tweeddale (£1500), Rea of Halterburnhead (£460), etc. Yetholm is in the presbytery of Kelso and the synod of Merse and Teviotdale; the living is worth £440. The parish church was built in 1836 on the site of its long, low, reed-thatched predecessor. It is a plain structure of dark-coloured stone, with 700 sittings and a square tower. At Town-Yetholm are a U.P. church (450 sittings) and a handsome new Gothic Free church (1882). The public school (1833), with accommodation for 205 children, had in 1884 an average attendance of 163, and a grant of £109, 4s. 6d. Valuation (1864) £8080, 12s. 3d., (1884) £7550, 10s. 11d. Pop. (1801) 1011, (1831) 1289, (1861) 1207, (1871) 1100, (1881) 1045.—*Ord. Sur.*, shs. 26, 18, 1864-63.

See Dr W. Baird's Memoir of the late Rev. Jn. Baird, *Minister of Yetholm from* 1829 *to* 1861 (Lond. 1862); the Rev. J. Baird's *Scottish Gipsies' Advocate* (Edinb. 1839); W. Simson's *History of the Gipsies* (New York, 1865; 2d ed. 1878); R. Murray's *Gipsies of the Border* (Galashiels, 1875); G. Borrow's *Romano Lavo Lil* (Lond. 1874); C. G. Leland's *English Gipsies and their Language* (Lond. 1874); J. Lucas' *Yetholm Gipsies* (Kelso, 1882); Dr C. Stuart's *David Blythe* (Kelso, 1883); *Ancient and Modern Britons* (2 vols., Lond. 1884); and W. Brockie's *Gipsies of Yetholm* (Kelso, 1884).

Yieldshields. See Roadmeetings.

Yoker, a village in Old Kilpatrick parish, Dumbartonshire, and Renfrew parish, Renfrewshire, on the right bank of the Clyde, 1 mile N of Renfrew. It has a post and telegraph office under Glasgow, a great shipbuilding yard, and a large distillery. Pop. (1871) 535, (1881) 1256, of whom 953 were in Old Kilpatrick.—*Ord. Sur.*, sh. 30, 1866.

Yoolfield, a village in Kemback parish, Fife, 3 miles E by N of Cupar.

Ythan, a smooth, slow river of Aberdeenshire, rising at the Wells of Ythan, 768 feet above sea-level, and winding 35¾ miles east-south-eastward, through or along the borders of Forgue, Auchterless, Fyvie, Methlick, Tarves, Ellon, Logie-Buchan, Slains, and Foveran parishes, till it falls into the German Ocean near the seaport village of Newburgh. It is a capital stream for salmon, sea-trout, and yellow trout; and pearl-mussels are still found in it when the water is low. The great pearl in the crown of Scotland is said to have been found here; and about 1750 Mr Tower, an Aberdeen merchant, got £100 sterling from a London jeweller for a lot of pearls from the Ythan. The price he had named was only £100 Scots, or £8, 6s. 8d.—*Ord. Sur.*, shs. 86, 87, 77, 1876-73.

Ythan Wells, a *quoad sacra* parish in Forgue and Auchterless parishes, Aberdeenshire, whose church stands 9 miles E by S of Huntly. Pop. (1871) 1494, (1881) 1315, of whom 1119 were in Forgue.—*Ord. Sur.*, sh. 86, 1876.

Zetland. See Shetland and Kerse House.

GENERAL SURVEY.

A SURVEY of Scotland appended to a copious gazetteer must of necessity be very general. Every natural, administrative, and ecclesiastical division of the country, every striking feature of its physical structure, each great cluster of islands, every range of heights, and remarkable mountain or hill, each lake and river and arm of the sea, every city, town, village, hamlet, and conspicuous mansion, every point of interest, be it what it may, a ruined castle or abbey, a prehistoric antiquity, a monument or a battlefield, has been so fully noticed in its alphabetical place or under some heading that naturally suggests itself, that a summary like the present has little scope for description, and need not even be studded with references. Yet such a rapid sketch as shall indicate the mutual relations of the parts, some facts which refer strictly to the country as a whole, and a few particulars which, while referring only to certain localities, or to classes of objects, could not, without frequent repetition, be inserted in the body of the work, will, it is believed, prove acceptable and serviceable to the reader.

I. POSITION, BOUNDARIES, EXTENT, AND AREA.

By H. A. WEBSTER, of the *Encyclopædia Britannica*, and Honorary Editor of the *Scottish Geographical Magazine*.

SCOTLAND is the northern part of the island of Great Britain, which was, at no distant geological date, a north-westward prolongation of the continent of Europe, but is now separated from it southward by the English Channel (from 22 to 150 miles broad and not 50 fathoms deep), and eastward by the comparatively shallow basin of the North Sea or German Ocean. The country is consequently bounded on all sides except one by the sea; and on the south side, owing to the inward sweep of the Solway Firth, it is connected with England only by an isthmus 60 miles across. There is, however, no natural break or limit, and the political boundary follows so capricious and irregular a line, there would be nothing surprising if more than one place could claim to be the prototype of that Evan Cottage in England with its garden in Scotland which plays so important a part in Mr Gilbert's *Engaged*. To cross the border without knowing it is as easy as to cross the imaginary line drawn round the globe and termed the equator. Popular language is quite at fault in using 'north of the Tweed' as a synonym for Scotland. The liberties of Berwick, which since 1482 have been attached to, though not fully incorporated with, England, cut away a very considerable cantle of the country on that side of the river; and the town of Berwick, it may be added parenthetically, is consequently not the county town of Berwickshire. We have to ascend the Tweed for about 5 miles before we reach the spot, a little above Gainslaw, where it begins to form the limit between the two kingdoms. The line thence continues upwards along the main channel, leaving a river island now to Scotland and now to England, and in the neighbourhood of Coldstream deflecting for half a mile to seize for Scotland a little strip of southern soil. From about 2° 19′ 40″ West longitude, it abruptly strikes south-east from the Tweed (whose course has hitherto been carrying it south-west), and holds on quite regardless of physical features, and with frequent bendings and indentings, till it reaches its eastmost point at Auchopecairn (2422 feet) in 2° 9′ 40″ West longitude, and as abruptly resumes a south-west direction. For upwards of 25 miles the water-parting and the political boundary generally coincide more or less completely, and we advance along the Cheviots from summit to summit—King's Seat, Windy Gate Hill, Beefstand Hill, Lamb Hill, Hungry Law, Leap Hill, etc. The boundary again becomes quite erratic in its

course, till, meeting the Kershope Burn, it follows that for $8\frac{3}{4}$ miles to its junction with Liddel Water. Instead of keeping by the Esk, into which the Liddel Water flows, it strikes almost due west to the river Sark, and with it returns to the channel of the Esk in the upper reaches of the Solway Firth. In consequence of the irregularities thus rapidly indicated, Scotland marches with England along a line of no less than 100 miles.

It would probably now be quite impossible to discover in detail the historical reason for each peculiarity of this line. The southern frontier of Scotland was substantially what it now is—the Solway, the Cheviots, and the Tweed—as early as the death of Malcolm Ceannmor. In the reign of Alexander II. an attempt was made to fix the exact line of demarcation by a perambulation of the eastern marches by English and Scottish knights. These commissioners failed to come to terms, but the task was partly accomplished by their successors in 1246, and the Laws of the Marches, settled in 1249 by twelve English and Scottish knights respectively, with the Sheriff of Northumberland and the Sheriff of Berwick, assume the line of the border to be fixed, though they only incidentally refer to one or two points of it. In subsequent legislation, and notably in the treaty of Northampton, which, in 1325, closed the War of Independence, the demarcation as it existed in the reign of Alexander III. is accepted as authoritative.

All Scotland lies to the west of the prime meridian of Greenwich, which, indeed, runs through the North Sea at a distance of from 70 to 160 miles from the Scottish coast. As the east and west relation which this implies between the towns of Scotland and those of England is not so clearly present to popular apprehension as the north and south relation which the general direction of the main lines of traffic helps to emphasise, it may be well to give the longitudes from Greenwich of some of the more important places in Scotland, along with the English towns which most nearly agree with them in this respect.

Portree,	6° 10′ W.	This meridian striking south through Dublin Bay is altogether west of England.	
Oban,	5° 28′	Penzance,	5° 32′
Inveraray,	5° 5′	Penrhyn,	5° 6′
Greenock,	4° 45′	Bodmin,	4° 42′
Ayr,	4° 38′	Cardigan,	4° 37′
Kilmarnock,	4° 30′	Launceston,	4° 21′
Glasgow,	4° 15′	Caermarthen, Eddystone Lighthouse,	4° 17′
Inverness,	4° 13′	Menai Bridge,	4° 12′
Kirkcudbright,	4° 4′	Bangor,	4° 6′
Stirling,	3° 55′	Swansea,	3° 54′
Linlithgow,	3° 36′	Whitehaven,	3° 37′
Elgin,	3° 18′	Merthyr Tydvil,	3° 20′
Edinburgh,	3° 15′	Sidmouth,	3° 13′
Wick (East Coast),	3° 4′	Liverpool (West Coast),	2° 59′
Dundee,	2° 58′	Newport (Monmouthshire),	2° 59′
Selkirk,	2° 50′	Axbridge,	2° 49′
St Andrews,	2° 48′	Shrewsbury,	2° 44′
Arbroath,	2° 32′	Bristol,	2° 34′
Dunbar,	2° 31′	Sherbourne,	2° 31′
Montrose,	2° 26′	Dorchester,	2° 26′
Stonehaven,	2° 13′	Worcester,	2° 13′
Aberdeen,	2° 6′	Malmesbury,	2° 6′
[Berwick],	2° 0′	Cheltenham,	2° 3′
Peterhead,	1° 47′	Salisbury,	1° 47′

Broadly stated, the result of this comparison is, that the east of Scotland is as far west as the west of England, and from this it follows, even if no allowance be made for the narrowing of the inter-meridian spaces as we advance northwards, that the west of Scotland is considerably nearer than the west of England to the coast of America. The advantage of such a position is partly counterbalanced through the fact that the portion of America which lies due west is the inhospitable coast of Labrador. As regards the relation of the east of Scotland to the European continent it is enough to note that a ship sailing due east from Lerwick would reach the Norwegian coast near Bergen, that from the Moray Firth it would make the Skager Rack or mouth of the Baltic, and that from Aberdeen or any of the more southern ports it would strike the coasts of Denmark.

The greatest length of the mainland of Scotland, in a line nearly due north and south from the Mull of Galloway to Cape Wrath, is 274 miles. The greatest length in any possible direction is 280 miles from the Mull of Galloway to Dunnet Head. The breadth varies greatly: from St Abbs Head in Berwickshire to the Point of Knapp in Argyllshire, 139 miles; from the mouth of the South Esk in Forfarshire to Ardnamurchan Point in Argyllshire, 144 miles; and from Buchan Ness in Aberdeenshire to the extremity of Applecross in Ross-shire, 146 miles. North of the Moray Firth the greatest breadth, from Duncansbay Head to Cape Wrath, is only 70 miles; and the least, from Dornoch Firth to Loch Broom, is 24. The whole country is so

penetrated by inlets of the sea that few points are more than 40 miles inland. From Grangemouth on the Firth of Forth to Glasgow on the Clyde the air line is not quite 25 miles.

According to the final results of the Ordnance Survey the total area of Scotland is 19,777,490 statute acres or 30,902.32 square miles, of which 19,063,231 acres or 29,786.29 square miles are land, 403,840 acres or 631 square miles are water, and 310,413 acres or 485.01 square miles are foreshore. Looking back it is curious to observe the several approximations made from time to time. While Major Dawson in 1851 estimated the total area at 20,047,462 acres, the Registrars in 1855 allowed no more than 19,656,315 acres, of which 17,199,081 were on the mainland and 2,457,234 on 386 islands (155 inhabited).

II. LEADING PHYSICAL FEATURES.

By James Geikie, LL.D., F.R.S., Professor of Geology in the University of Edinburgh.

Scotland, like 'all Gaul,' is divided into three parts, namely, the Highlands, the Central Lowlands, and the Southern Uplands. These, as a correctly drawn map will show, are natural divisions, for they are in accordance not only with the actual configuration of the surface, but with the geological structure of the country. The boundaries of these principal districts are well defined. Thus, an approximately straight or gently undulating line taken from Stonehaven, in a south-west direction, along the northern outskirts of Strathmore to Glen Artney, and thence through the lower reaches of Loch Lomond to the Firth of Clyde at Kilcreggan, marks out with precision the southern limits of the Highland area and the northern boundary of the Central Lowlands. The line that separates the Central Lowlands from the Southern Uplands is hardly so prominently marked throughout its entire course, but it follows precisely the same north-east and south-west trend, and may be traced from Dunbar along the base of the Lammermuir and Moorfoot Hills, the Lowthers, and the hills of Galloway and Carrick to Girvan. In each of the two mountain tracts—the Highlands and the Southern Uplands—areas of low-lying land occur, while in the intermediate Central Lowlands isolated prominences and certain well-defined belts of hilly ground make their appearance. The statement, so frequently repeated in class-books and manuals of geography, that the mountains of Scotland consist of three (some writers say five) 'ranges,' is erroneous and misleading. The original author of this strange statement probably derived his ignorance of the physical features of the country from a study of those antiquated maps upon which the mountains of poor Scotland are represented as sprawling and wriggling about like so many inebriated centipedes and convulsed caterpillars. Properly speaking, there is not a true mountain-range in the country. If we take this term, which has been very loosely used, to signify a linear belt of mountains—that is, an elevated ridge notched by cols or 'passes' and traversed by transverse valleys—then in place of 'three' or 'five' such ranges we might just as well enumerate fifty or sixty, or more, in the Highlands and Southern Uplands. Or, should any number of such dominant ridges be included under the term 'mountain-range,' there seems no reason why all the mountains of the country should not be massed under one head and styled the 'Scottish Range.' When the geologist sees such a motley assemblage of heights as Goat Fell, the Lowthers, the Cheviots, the Pentlands, and the Lammermuirs grouped together as a 'range,' as they are in some school-books, he may be excused for protesting warmly against such a preposterous travesty of nature. A mountain-range, properly so called, is a belt of high ground which has been ridged up by earth-movements. It is a fold, pucker, or wrinkle in the earth's crust, and its general external form coincides more or less closely with the structure or arrangement of the rock-masses of which it is composed. A mountain-range of this characteristic type, however, seldom occurs singly, but is usually associated with other parallel ranges of the same kind—the whole forming together what is called a 'mountain-chain,' of which the Alps may be taken as an example. That chain consists of a vast succession of various kinds of rocks which at one time were disposed in horizontal layers or strata. But during subsequent earth-movements those horizontal beds were compressed laterally, squeezed, crumpled, contorted, and thrown, as it were, into gigantic undulations and sharper folds and plications. And, notwithstanding the enormous erosion or denudation to which the long parallel ridges or ranges have been subjected, we can

yet see that the general contour of these corresponds in large measure to the plications or foldings of the strata. The long parallel ranges and intermediate hollows of the Jura, for example, are formed by undulations of the folded strata—the tops of the long hills coinciding more or less closely with the arches, and the intervening hollows with the troughs. Now folded, crumpled, and contorted rock-masses are common enough in the mountainous parts of Scotland, but the configuration of the surface rarely or never coincides with the inclination of the underlying strata. The mountain crests, so far from being formed by the tops of great folds of the strata, very often show precisely the opposite kind of structure. In other words, the rocks, instead of being inclined away from the hill-tops like the roof of a house from its central ridge, frequently dip into the mountains. That is to say, the mountains are often built up of a series of strata arranged like a pile of saucers, one within another.

There is yet another feature which brings out clearly the fact that the slopes of the surface have not been determined by the inclination of the strata. The main water-parting that separates the drainage-system of the west from that of the east of Scotland does not coincide with any axis of elevation. It is not formed by an anticlinal fold or 'saddleback.' In point of fact, it traverses the strata at all angles to their inclination. But this would not have been the case had the Scottish mountains consisted of a chain of true mountain-ranges. Our mountains, therefore, are merely monuments of denudation; they are the relics of elevated plateaux which have been deeply furrowed and trenched by running water and other agents of erosion. A short sketch of the leading features presented by the three divisions of the country will serve to make this plain.

The Highlands.—The southern boundary of this, the most extensive of the three divisions, has already been defined. The straightness of that boundary is due to the fact that it coincides with a great line of fracture of the earth's crust—on the north or Highland side of which occur slates, schists, and various other hard and tough rocks, while on the south side the prevailing strata are sandstones, etc., which are not of so durable a character. The latter, in consequence of the comparative ease with which they yield to the attacks of the eroding agents—rain and rivers, frost and ice—have been worn away to a greater extent than the former, and hence the Highlands, along their southern margin, abut more or less abruptly upon the Lowlands. Looking across Strathmore from the Sidlaws or the Ochils, the mountains seem to spring suddenly from the low grounds at their base, and to extend north-east and south-west, as a great wall-like rampart. The whole area north and west of this line may be said to be mountainous, its average elevation being probably not less than 1500 feet above the sea.

A glance at the accompanying orographical map of Scotland, reduced by Mr Bartholomew from the contoured sheets of the Ordnance Survey, and therefore affording a correct view of the physical relief of the country, will show better than any verbal description the manner in which our Highland mountains are grouped. It will be at once seen that to apply the term 'range' to any particular area of those high grounds is simply a misuse of terms. Not only are the mountains not formed by plications and folds, but they do not even trend in linear directions. It is true that a well-trained eye can detect certain differences in the form and often in the colouring of the mountains when these are traversed from south-east to north-west. Such differences correspond to changes in the composition and structure of the rock-masses, which are disposed or arranged in a series of broad belts and narrower bands, running from south-west to north-east across the whole breadth of the Highlands. Each particular kind of rock gives rise to a special configuration or to certain characteristic features. Thus, the mountains that occur within a belt of slate often show a sharply cut outline, with more or less pointed peaks and somewhat serrated ridges—the Aberuchill Hills, near Comrie, are an example. In the regions of gneiss and granite the mountains are usually rounded and lumpy in form. Among the schists, again, the outlines are generally more angular. Quartz-rock often shows peaked and jagged outlines; while each variety of rock has its own particular colour, and this in certain states of the atmosphere is very marked. The mode in which the various rocks yield to the 'weather'—the forms of their cliffs and corries—these and many other features strike a geologist at once; and therefore, if we are to subdivide the Highland mountains into 'ranges,' a geological classification seems the only natural arrangement that can be followed. Unfortunately, however, our geological lines, separating one belt or 'range' from another, often run across the very heart of great mountain-masses. Our 'ranges' are distinguished from each other simply by superficial differences of feature and structure. No long parallel hollows separate a 'range' of schist mountains from the succeeding 'ranges' of quartz-rock, gneiss, or granite. And no degree of careful contouring could succeed in expressing the niceties of configuration just referred to, unless the maps were on a very large scale, indeed. A geological classification or grouping of the mountains into linear belts cannot, therefore, be shown upon any ordinary orographical map. Such a map can present only the relative heights

and disposition of the mountain-masses, and these last, in the case of the Highlands, as we have seen, cannot be called 'ranges' without straining the use of that term. Any wide tract of the Highlands, when viewed from a commanding position, looks like a tumbled ocean in which the waves appear to be moving in all directions. One is also impressed with the fact that the undulations of the surface, however interrupted they may be, are broad—the mountains, however they may vary in detail according to the character of the rocks, are massive, and generally round-shouldered and often somewhat flat-topped, while there is no great disparity of height among the dominant points of any individual group. Let us take, for example, the knot of mountains between Loch Maree and Loch Torridon. There we have a cluster of eight pyramidal mountain-masses, the summits of which do not differ much in elevation. Thus, in Llathach, two points reach 3358 and 3486 feet; in Beinn Alligin there are also two points reaching 3021 and 3232 feet respectively; in Beinn Dearg we have a height of 2995 feet; in Beinn Eighe are three dominant points—3188, 3217, and 3309 feet. The four pyramids to the north are somewhat lower—their elevations being 2860, 2801, 2370, and 2892 feet. The mountains of Lochaber and the Monadhliath Mountains exhibit similar relationships; and the same holds good with all the mountain-masses of the Highlands. No geologist can doubt that such relationship is the result of denudation. The mountains are monuments of erosion—they are the wreck of an old table-land—the upper surface and original inclination of which are approximately indicated by the summits of the various mountain-masses and the directions of the principal water-flows. If we, in imagination, fill up the valleys with the rock-material which formerly occupied their place, we shall, in some measure, restore the general aspect of the Highland area before its mountains began to be shaped out by Nature's saws and chisels.

It will be observed that while streams descend from the various mountains to every point of the compass, their courses having often been determined by geological structure, etc., their waters yet tend eventually to collect and flow as large rivers in certain definite directions. These larger rivers flow in the direction of the average slope of the ancient table-land, while the main water-partings that separate the more extensive drainage-areas of the country mark out, in like manner, the dominant portions of the same old land-surface. The water-parting of the North-West Highlands runs nearly north and south, keeping quite close to the western shore, so that nearly all the drainage of that region flows inland. The general inclination of the North-West Highlands is therefore easterly towards Glenmore and the Moray Firth. In the region lying east of Glenmore the average slopes of the land are indicated by the directions of the rivers Spey, Don, and Tay. These two regions—the North-West and South-East Highlands—are clearly separated by the remarkable depression of Glenmore, which extends through Loch Linnhe, Loch Lochy, and Loch Ness, and the further extension of which towards the north-east is indicated by the straight coast-line of the Moray Firth as far as Tarbat Ness. Now this long depression marks a line of fracture and displacement of very great geological antiquity. The old plateau of the Highlands was fissured and split in two—that portion which lay to the north-west sinking along the line of fissure to a great but at present unascertained depth. Thus the waters that flowed down the slopes of the north-west portion of the broken plateau were dammed by the long wall of rock on the 'up-cast,' or south-east side of the fissure, and compelled to flow off to north-east and south-west along the line of breakage. The erosion thus induced sufficed in the course of time to hollow out Glenmore and all the mountain valleys that open upon it from the west.

The inclination of that portion of the fissured plateau which lay to the south-east is indicated, as already remarked, by the trend of the principal rivers. It was north-east in the Spey district, nearly due east in the area drained by the Don, east and south-east in that traversed by the Tay and its affluents, westerly and south-westerly in the district lying east of Loch Linnhe.* Thus, a line drawn from Ben Nevis through the Cairngorm and Ben Muich Dhui Mountains to Kinnaird Point passes through the highest land in the South-East Highlands, and probably indicates approximately the dominant portion of the ancient plateau. North of that line the drainage is towards the Moray Firth; east of it the rivers discharge to the North Sea; while an irregular winding line, drawn from Ben Nevis eastward through the Moor of Rannoch and southward to Ben Lomond, forms the water-parting between the North Sea and Atlantic, and doubtless marks another dominant area of the old table-land.

That the valleys which discharge their water-flow north and east to the Moray Firth and the North Sea have been excavated by rivers and the allied agents of erosion, is sufficiently

* The geological reader hardly requires to be reminded that many of the minor streams would have their courses determined, or greatly modified, by the geological structure of the ground. Thus, such streams often flow along the 'strike' and other 'lines of weakness,' and similar causes, doubtless, influenced the main rivers during the gradual excavation of their valleys.

evident. All the larger rivers of that wide region are typical. They show the orthodox three courses—namely, a torrential or mountain track, a middle or valley track, and a lower or plain track. The same is the case with some of the rivers that flow east from the great north and south water-parting of the North-West Highlands, as, for example, those that enter the heads or Beauly Firth, Cromarty Firth, and Dornoch Firth. Those, however, which descend to Loch Lochy and Loch Linnhe, and the sea-lochs of Argyllshire, have no lower or plain track. When we cross the north and south water-parting of the North-West Highlands, we find that many of the streams are destitute of even a middle or valley track. The majority are mere mountain torrents when they reach the sea. Again, on the eastern watershed of the same region a large number of the valleys contain lakes in their upper and middle reaches, and this is the case also with not a few of the valleys that open upon the Atlantic. More frequently, however, the waters flowing west pass through no lakes, but enter the sea at the heads of long sea-lochs or fiords. This striking contrast between the east and west is not due to any difference in the origin of the valleys. The western valleys are as much the result of erosion as those of the east. The present contrast, in fact, is more apparent than real, and arises from the fact that the land area on the Atlantic side has been greatly reduced in extent by subsidence. The western fiords are merely submerged land-valleys. Formerly the Inner and Outer Hebrides were united to themselves and the mainland, the country of which they formed a part stretching west into the Atlantic, as far probably as the present 100-fathoms line. Were that drowned land to be re-elevated, each of the great sea-lochs would appear as a deep mountain valley containing one or more lake basins of precisely the same character as those that occur in so many valleys on the eastern watershed. Thus we must consider all the islands lying off the west coast of the Highlands, including the major portions of Arran and Bute, as forming part and parcel of the Highland division of Scotland. The presence of the sea is a mere accident; the old lands now submerged were above its level during a very recent geological period—a period well within the lifetime of the existing fauna and flora.

The old table-land, of which the Highlands and Islands are the denuded and unsubmerged relics, is of vast geological antiquity. It was certainly in existence, and had even undergone very considerable erosion, before the Old Red Sandstone period, as is proved by the fact that large tracts of the Old Red Sandstone formation are found occupying hollows in its surface. Glenmore had already been excavated when the conglomerates of the Old Red Sandstone began to be laid down. Some of the low-lying maritime tracts of the Highland area in Caithness, and the borders of the Moray Firth, are covered with the sandstones of that age; and there is evidence to show that these strata formerly extended over wide regions, from which they have since been removed by erosion. The fact that the Old Red Sandstone deposits still occupy such extensive areas in the north-east of the mainland, and in Orkney, shows that the old table-land shelved away gradually to north and east, and the same conclusion may be drawn, as we have seen, from the direction followed by the main lines of the existing drainage-system. We see, in short, in the table-land of the Highlands one of the oldest elevated regions of Europe—a region which has been again and again submerged either in whole or in part, and covered with the deposits of ancient seas and lakes, only to be re-elevated, time after time, and thus to have those deposits in large measure swept away from its surface by the long-continued action of running-water and other agents of denudation.

The Central Lowlands.—The belt of low-lying ground that separates the Highlands from the Southern Uplands is, as we have seen, very well defined. In many places the Uplands rise along its southern margin as abruptly as the Highlands in the north. The southern margin coincides, in fact, for a considerable distance (from Girvan to the base of the Moorfoots) with a great fracture that runs in the same direction as the bounding fracture or fault of the Highlands. The Central Lowlands may be described, in a word, as a broad depression between two table-lands. A glance at the map will show that the principal features of the Lowlands have a north-easterly trend—the same trend, in fact, as the bounding lines of the division. To this arrangement there are some exceptions, the principal being the belt of hilly ground that extends from the neighbourhood of Paisley south-east through the borders of Renfrewshire and Ayrshire, to the vicinity of Muirkirk. The major part of the Lowlands is under 500 feet in height, but some considerable portions exceed an elevation of 1000 feet, while here and there the hills approach a height of 2000 feet—the two highest points (2352 and 2335 feet) being attained in Ben Cleugh, one of the Ochils, and in Tinto. Probably the average elevation of the Lowland division does not exceed 350 or 400 feet. Speaking generally, the belts of hilly ground, and the more or less isolated prominences, are formed of more durable rocks than are met with in the adjacent lower-lying tracts. Thus the Sidlaws, the Ochil Hills, and the heights in Renfrewshire and Ayrshire, are composed chiefly of more or less hard and tough volcanic rocks; and when sandstones enter into the formation of a line of hills, as in the Sidlaws, they generally owe their preservation to the presence of the volcanic rocks with which

they are associated. This is well illustrated by the Lomond Hills in Fifeshire, the basal and larger portion of which consists chiefly of somewhat soft sandstones, which have been protected from erosion by an overlying sheet of hard basalt-rock. All the isolated hills in the basin of the Forth are formed of knobs, bosses, and sheets of various kinds of igneous rock, which are more durable than the sandstones, shales, and other sedimentary strata by which they are surrounded. Hence it is very evident that the configuration of the Lowland tracts of Central Scotland is due to denudation. The softer and more readily disintegrated rocks have been worn away to a greater extent than the harder and less yielding masses.

Only in a few cases do the slopes of the hill-belts coincide with folds of the strata. Thus, the northern flanks of the Sidlaws and the Ochils slope towards the north-west, and this also is the general inclination of the old lavas and other rocks of which those hills are composed. The southern flanks of the same hill-belt slope in Fifeshire towards the south-east—this being also the dip or inclination of the rocks. The crest of the Ochils coincides, therefore, more or less closely, with an anticlinal arch or fold of the strata. But when we follow the axis of this arch towards the north-east into the Sidlaws, we find it broken through by the Tay valley—the axial line running down through the Carse of Gowrie to the north of Dundee. From the fact that many similar anticlinal axes occur throughout the Lowlands which yet give rise to no corresponding features at the surface, we may conclude that the partial preservation of the anticline of the Ochils and Sidlaws is simply owing to the greater durability of the materials of which those hills consist. Had the arch been composed of sandstones and shales it would most probably have given rise to no such prominent features as are now visible.

Another hilly belt, which at first sight appears to correspond roughly to an anticlinal axis, is that broad tract of igneous rocks which separates the Kilmarnock coal-field from the coal-fields of the Clyde basin. But although the old lavas of that hilly tract slope north-east and south-west, with the same general inclination as the surface, yet examination shows that the hills do not form a true anticline. They are built up of a great variety of ancient lavas and fragmental tuffs or 'ashes,' which are inclined in many different directions. In short, we have in those hills the degraded and sorely denuded fragments of an ancient volcanic bank formed by eruptions that began upon the bottom of a shallow sea in early Carboniferous times, and subsequently became sub-aerial. And there is evidence to show that after the eruptions ceased the volcanic bank was slowly submerged, and eventually buried underneath the accumulating sediments of later Carboniferous times. The exposure of the ancient volcanic bank at the surface has been accomplished by the denudation of the stratified masses which formerly covered it, and its existence as a dominant elevation at the present day is solely due to the fact that it is built up of more persistent materials than occur in the adjacent low-lying areas. The Ochils and the Sidlaws are of greater antiquity, but have a somewhat similar history. Into this, however, it is not necessary to go.

The principal hills of the Lowlands form two interrupted belts, extending north-east and south-west, one of them, which we may call the Northern Heights, facing the Highlands, and the other, which may in like manner be termed the Southern Heights, flanking the great Uplands of the south. The former of these two belts is represented by the Garvock Hills, lying between Stonehaven and the valley of the North Esk; the Sidlaws, extending from the neighbourhood of Montrose to the valley of the Tay at Perth; the Ochil Hills, stretching along the south side of the Firth of Tay to the valley of the Forth at Bridge of Allan; the Lennox Hills, ranging from the neighbourhood of Stirling to Dumbarton; the Kilbarchan Hills, lying between Greenock and Ardrossan, the Cumbrae Islands and the southern half of Arran; and the same line of heights reappears in the south end of Kintyre. A well-marked hollow, trough, or undulating plain of variable width, separates these Northern Heights from the Highlands, and may be followed all the way from near Stonehaven, through Strathmore, to Crieff and Auchterarder. Between the valleys of the Earn and Teith this plain attains an abnormal height (the Braes of Doune); but from the Teith, south-west by Flanders Moss and the lower end of Loch Lomond to the Clyde at Helensburgh, it resumes its characteristic features. It will be observed also that a hollow separates the southern portion of Arran from the much loftier northern or Highland area. The Braes of Doune, extending from Glen Artney south-east to Strath Allan, although abutting upon the Highlands, is clearly marked off from that great division by geological composition and structure, by elevation and configuration. It is simply a less deeply eroded portion of the long trough or hollow.

Passing now to the Southern Heights of the Lowlands, we find that these form a still more interrupted belt than the Northern Heights, and that they are less clearly separated by an intermediate depression from the great Uplands which they flank. They begin in the north-east with the isolated Garleton Hills, between which and the Lammermuirs a narrow low-lying trough or hollow appears. A considerable width of low ground now intervenes before we

reach the Pentland Hills, which are in like manner separated from the Southern Uplands by a broad low-lying tract. At their southern extremity, however, the Pentlands merge more or less gradually into a somewhat broken and interrupted group of hills which abut abruptly on the Southern Uplands, in the same manner as the Braes of Doune abut upon the slate hills of the Highland borders. In this region the greatest heights reached are in Tinto (2335 feet) and Cairntable (1844), and, at the same time, the hills broaden out towards the north-west, where they are continued by the belt of volcanic rocks already described as extending between the coal-fields of the Clyde and Kilmarnock. Although the Southern Heights abut so closely upon the Uplands lying to the south, there is no difficulty in drawing a firm line of demarcation between the two areas—geologically and physically they are readily distinguished. No one with any eye for form, no matter how ignorant he may be of geology, can fail to see how strongly contrasted are such hills as Tinto and Cairntable with those of the Uplands, which they face. The Southern Heights are again interrupted towards the south-east by the valleys of the Ayr and Doon, but they reappear in the hills that extend from the Heads of Ayr to the valley of the Girvan.

Betwixt the Northern and Southern Heights spread the broad Lowland tracts that drain towards the Forth, together with the lower reaches of the Clyde valley, and the wide moors that form the water-parting between that river and the estuary of the Forth. The hills that occur within this inner region of the Central Lowlands are usually more or less isolated, and are invariably formed by outcrops of igneous rock. Their outline and general aspect vary according to the geological character of the rocks of which the hills are composed—some forming more or less prominent escarpments like those of the Bathgate Hills and the hills behind Burntisland and Kinghorn, others showing a soft rounded contour like the Saline Hills in the west of Fifeshire. Of the same general character as this inner Lowland region is the similar tract watered by the Irvine, the Ayr, and the Doon. This tract, as we have seen, is separated from the larger inner region lying to the east by the volcanic hills that extend from the Southern Heights north-west into Renfrewshire.

The largest rivers that intersect the Central Lowlands take their rise, as might be expected, in the mountainous table-lands to the north and south. Of these the principal are the North and South Esks, the Tay and the Isla, the Earn and the Forth, all of which, with numerous tributaries, descend from the Highlands. And it will be observed that they have breached the line of the Northern Heights in three places—namely, in the neighbourhood of Montrose, Perth, and Stirling. The only streams of any importance coming north from the Southern Uplands are the Clyde and Doon, both of which in like manner have broken through the Southern Heights. Now, just as the main water-flows of the Highlands indicate the average slope of the ancient land-surface before it was trenched and furrowed by the innumerable valleys that now intersect it, so the direction followed by the greater rivers that traverse the Lowlands marks out the primeval slopes of that area. One sees at a glance, then, that the present configuration of this latter division has been brought about by the erosive action of the principal rivers and their countless affluents, aided by the sub-aerial agents generally—rain, frost, ice, etc. The hills rise above the average level of the ground, not because they have been ridged up from below, but simply owing to the more durable nature of their component rocks. That the Northern and Southern Heights are breached only shows that the low grounds now separating those heights from the adjacent Highlands and Southern Uplands formerly stood at a higher level, and so allowed the rivers to make their way more or less directly to the sea. Thus, for example, the long trough of Strathmore has been excavated out of sandstones, the upper surface of which once reached a much greater height, and sloped outwards from the Highlands across what is now the ridge of the Sidlaw Hills. Here, then, in the Central Lowlands, as in the Highlands, true mountain- or hill-ranges are absent. But if we are permitted to term any well-marked line or belt of high ground a 'range,' then the Northern and Southern Heights of the Lowlands are better entitled to be so designated than any series of mountains in the Highlands.

The Southern Uplands.—The northern margin of this wide division having already been defined, we may now proceed to examine the distribution of its mountain-masses. Before doing so, however, it may be as well to point out that considerable tracts in Tweeddale, Teviotdale, and Liddesdale, together with the Cheviot Hills, do not properly belong to the Southern Uplands. In fact, the Cheviots bear the same relation to those Uplands as the Northern Heights do to the Highlands. Like them they are separated by a broad hollow from the Uplands, which they face—a hollow that reaches its greatest extent in Tweeddale, and rapidly wedges out to the south-west, where the Cheviots abut abruptly upon the Uplands. Even where this abrupt contact takes place, however, the different configuration of the two regions would enable any geologist to separate the one set of mountains from the other. But for geographical purposes we may conveniently disregard these geological contrasts, and include

within the Southern Uplands all the area lying between the Central Lowlands and the English Border.

If there are no mountains in the Highlands so grouped and arranged as to be properly termed 'ranges,' this is not less true of the Southern Uplands. Perhaps it is the appearance which those Uplands present when viewed from the Central Lowlands that first suggested the notion that they were ranges. They seem to rise like a wall out of the low grounds at their base, and extend far as eye can reach in an approximately straight line. It seems more probable, however, that our earlier cartographers merely meant, by their conventional hill-shading, to mark out definitely the water-partings. But to do so in this manner now, when the large contour maps of the Ordnance Survey may be in any one's hands, is inexcusable. A study of those maps, or, better still, a visit to the tops of a few of the dominant points in the area under review, will effectually dispel the idea that the Southern Uplands consist of a series of ridges zigzagging across the country. Like the Highlands, the area of the Southern Uplands is simply an old table-land, furrowed into ravine and valley by the operation of the various agents of erosion.

Beginning our survey of these Uplands in the east, we encounter first the Lammermuir Hills—a broad undulating plateau—the highest elevations of which do not reach 2000 feet. West of this come the Moorfoot Hills and the high grounds lying between the Gala and the Tweed—a tract which averages a somewhat higher elevation—two points exceeding 2000 feet in height. The next group of mountains we meet is that of the Moffat Hills, in which head a number of important rivers—the Tweed, the Yarrow, the Ettrick, and the Annan. Many points in this region exceed 2000 feet; others approach 2500; and some reach nearly 3000 feet, such as Broad Law (2754) and Dollar Law (2680). In the south-west comes the group of the Lowthers, with dominant elevations of more than 2000 feet. Then follow the mountain-masses in which the Nith, the Ken, the Cree, the Doon, and the Girvan take their rise, many of the heights exceeding 2000 feet, and a number reaching and even passing 2500, the dominant point being reached in the noble mountain-mass of the Merrick (2764). In the extreme south-west the Uplands terminate in a broad undulating plateau, of which the highest point is but little over 1000 feet. All the mountain groups now referred to are massed along the northern borders of the Southern Uplands. In the south-west the general surface falls more or less gradually away towards the Solway—the 500-feet contour line being reached at fifteen miles, upon an average, from the sea-coast. In the extreme north-east the high grounds descend in like manner into the rich low grounds of the Merse. Between these low grounds and Annandale, however, the Uplands merge, as it were, into the broad elevated moory tract that extends south-east, to unite with the Cheviots—a belt of hills rising along the English Border to heights of 1964 feet (Peel Fell) and 2676 (the Cheviot).

The general configuration of the main mass of the Southern Uplands—that is to say, the mountain groups that extend along the northern portion of the area under review, from Loch Ryan to the coast between Dunbar and St Abbs Head—is somewhat tame and monotonous. The mountains are flat-topped elevations, with broad rounded shoulders and smooth grassy slopes. Standing on the summit of some of the high points, one seems to be in the midst of a wide, gently undulating plain, the surface of which is not broken by the appearance of any isolated peaks or eminences. Struggling across the bogs and peat-mosses that cover so many of those flat-topped mountains, the wanderer ever and anon suddenly finds himself on the brink of a deep green dale. He discovers, in short, that he is traversing an elevated undulating table-land, intersected by narrow and broad trench-like valleys that radiate outwards in all directions from the dominant bosses and swellings of the plateau. The mountains, therefore, are merely broad ridges and banks separating contiguous valleys; in a word, they are, like the mountains of the Highlands, monuments of erosion, which do not run in linear directions, but form irregular groups and masses.

The rocks that enter into the formation of this portion of the Southern Uplands have much the same character throughout. Consequently there is less variety of contour and colour than in the Highlands. The hills are not only flatter atop, but are generally much smoother in outline, there being a general absence of those beetling crags and precipices which are so common in the Highland regions. Now and again, however, the mountains assume a rougher aspect. This is especially the case with those of Carrick and Galloway, amongst which we encounter a wildness and grandeur which are in striking contrast to the gentle pastoral character of the Lowthers and similar tracts extending along the northern and higher parts of the Southern Uplands. Descending to details, the geologist can observe also modifications of contour even among those monotonous rounded hills. Such modifications are due to differences in the character of the component rocks, but they are rarely so striking as the modifications that arise from the same cause in the Highlands. To the trained eye, however, they are sufficiently manifest, and upon a geologically coloured map, which shows the various belts of

rock that traverse the uplands from south-west to north-east, it will be found that the mountains occurring within each of those separate belts have certain distinctive features. Such features, however, cannot be depicted upon a small orographical map. The separation of those mountains into distinct ranges, by reference to their physical aspect, is even less possible here than in the Highlands. Now and again bands of certain rocks, which are of a more durable character than the other strata in their neighbourhood, give rise to pronounced ridges and banks, while hollows and valleys occasionally coincide more or less closely with the outcrop of the more readily eroded strata; but such features are mere minor details in the general configuration of the country. The courses of brooks and streams may have been frequently determined by the nature and arrangement of the rocks, but the general slope of the Uplands and the direction of the main lines of water-flow are at right angles to the trend of the strata, and cannot therefore have been determined in that way. The strata generally are inclined at high angles—they occur, in short, as a series of great anticlinal arches and synclinal curves, but the tops of the grand folds have been planed off, and the axes of the synclinal troughs, so far from coinciding with valleys, very often run along the tops of the highest hills. The foldings and plications do not, in a word, produce any corresponding undulations of the surface.

Mention has been made of the elevated moory tracts that serve to connect the Cheviots with the loftier uplands lying to north-west. The configuration of these moors is tamer even than that of the regions just described, but the same general form prevails from the neighbourhood of the Moffat Hills to the head-waters of the Teviot. There, however, other varieties of rock appear, and produce corresponding changes in the aspect of the high grounds. Not a few of the hills in this district stand out prominently. They are more or less pyramidal and conical in shape, being built up of sandstones often crowned atop with a capping of some crystalline igneous rock, such as basalt. The Maiden Paps, Leap Hill, Needs Law, and others are examples. The heights draining towards Liddesdale and the lower reaches of Eskdale, composed chiefly of sandstones, with here and there intercalated sheets of harder igneous rock, frequently show escarpments and terraced outlines, but have a general undulating contour; and similar features are characteristic of the sandstone mountains that form the south-west portion of the Cheviots. Towards the north-east, however, the sandstones give place to various igneous rocks, so that the hills in the north-east section of the Cheviots differ very much in aspect and configuration from those at the other extremity of the belt. They have a more varied and broken outline, closely resembling many parts of the Ochils and other portions of the northern and southern heights of the Central Lowlands.

The low-lying tracts of Roxburghshire and the Merse, in like manner, present features which are common to the inner region of the Central Lowlands. Occasional ridges of hills rise above the general level of the land, as at Smailholm and Stitchel to the north of Kelso, while isolated knolls and prominences—some bald and abrupt, others smooth and rounded—help to diversify the surface. Bonchester Hill, Rubers Law, the Dunian, Penielheugh, Minto Hills, and the Eildons may be mentioned as examples. All of these are of igneous origin, some being mere caps of basalt resting upon a foundation of sandstone, while others are the stumps of isolated volcanoes.

In the maritime tracts of Galloway the low grounds repeat, on a smaller scale, the configuration of the lofty uplands behind, for they are composed of the same kinds of rock. Their most remarkable feature is the heavy mountain-mass of Criffel, rising near the mouth of the Nith to a height of 1800 feet.

Everywhere, therefore, throughout the region of the Southern Uplands, in hilly and low-lying tracts alike, we see that the land has been modelled and contoured by the agents of erosion. We are dealing, as in the Highlands, with an old table-land, in which valleys have been excavated by running water and its helpmates. Nowhere do we encounter any linear banks, ridges, or ranges as we find described in the class-books, and represented upon many general maps of the country. In one of those manuals we read that in the southern district 'the principal range of mountains is that known as the Lowther Hills, which springs off from the Cheviots, and, running in a zigzag direction to the south-west, terminates on the west coast near Loch Ryan.' This is quite true, according to many common maps, but unfortunately the 'range' exists upon those maps and nowhere else. The zigzag line described is not a range of mountains, but a water-parting, which is quite another matter.

The table-land of the Southern Uplands, like that of the Highlands, is of immense antiquity. Long before the Old Red Sandstone period, it had been furrowed and trenched by running water. Of the original contour of its surface, all we can say is, that it formed an undulating plateau, the general slope of which was towards south-east. This is shown by the trend of the more important rivers, such as the Nith and the Annan, the Gala and the Leader; and by the distribution of the various strata pertaining to the Old Red Sandstone and later geological periods. Thus, strata of Old Red Sandstone and Carboniferous age occupy the Merse

and the lower reaches of Teviotdale, and extend up the valley of the Whitadder and the Leader into the heart of the Silurian Uplands. In like manner Permian sandstones are well developed in the ancient hollows of Annandale and Nithsdale. Along the northern borders of the Southern Uplands we meet with similar evidence to show that even as early as Old Red Sandstone times the ancient plateau, along what is now its northern margin, was penetrated by valleys that drained towards the north. The main drainage, however, then as now, was directly towards south-east.

Many geological facts conspire to show that the Silurian table-land of these Uplands has been submerged, like the Highlands, in whole or in part. This happened at various periods, and each time the land went down it received a covering of newer accumulations—patches of which still remain to testify to the former extent of the submergences. From the higher portions of the Uplands those accumulations have been almost wholly swept away, but they have not been entirely cleared out of the ancient valleys. They still mantle the borders of the Silurian area, particularly in the north-east, where they attain a great thickness in the moors of Liddesdale and the Cheviot Hills. The details of the evolution of the whole area of the Southern Uplands form an interesting study, but this pertains rather to Geology than to Physical Geography. It is enough, from our present point of view, to be assured that the main features of the country were chalked out, as it were, at a very distant geological period, and that all the infinite variety in the relief of our land has been brought about directly, not by titanic convulsions and earth-movements, but by the long-continued working of rain and rivers—of frost and snow and ice, supplemented from time to time by the action of the sea.

The physical features more particularly referred to in this description are of course only the bolder and more prominent contours—those, namely, which can be expressed with sufficient accuracy upon sheets of such a size as the accompanying orographical map of Scotland. With larger maps considerably more detail can be added, and many characteristic and distinguishing features will appear according to the care with which such maps are drawn. In the case of the Ordnance Survey Map, on the scale of 1 inch to a mile, the varying forms of the surface are so faithfully delineated as frequently to indicate to a trained observer the nature of the rocks and the geological structure of the ground. The artists who sketched the hills must indeed have had good eyes for form. So carefully has their work been done, that it is often not difficult to distinguish upon their maps hills formed of such rocks as sandstone from those that are composed of more durable kinds. The individual characteristics of mountains of schist, of granite, of quartz-rock, of slate, are often well depicted: nay, even the varieties of igneous rock which enter into the formation of the numerous hills and knolls of the Lowlands can frequently be detected by the features which the artists have so intelligently caught. Another set of features which their maps display are those due to glaciation. These are admirably brought out, even down to the smallest details. A glance at such maps as those of Teviotdale and the Merse, for example, shows at once the direction taken by the old *mer de glace*. The long parallel flutings of the hill-slopes, *roches moutonnées*, projecting knolls and hills with their 'tails,' the great series of banks and ridges of stony clay which trend down the valley of the Tweed—these, and many more details of interest to specialists, are shown upon the maps. All over Scotland similar phenomena are common, and have been reproduced with marvellous skill on the shaded sheets issued by the Ordnance Survey. And yet the artists were not geologists. The present writer is glad of this opportunity of recording his obligations to those gentlemen. Their faithful delineations of physical features have given him many valuable suggestions, and have led up to certain observations which might otherwise not have been made.

III. MOUNTAINS, LAKES, RIVERS, AND ISLANDS.

By H. A. Webster, of the *Encyclopædia Britannica*.

MOUNTAINS.

The following table of the Scottish Mountains contains the names and altitudes of all those that rise upwards of 3900 feet above the sea, of the greater number of those which exceed 3000 feet, and of a small number of less elevation which happen to be familiarly known. In the difficult matter of orthography the commoner names, like Ben Ledi and Ben Lawers, are given in their current Anglicised form; for those which are of rarer occurrence in speech and writing, the Ordnance Survey's Gaelic spelling is usually retained. In a few cases the more popular form and the more accurate are placed side by side. Further information in regard to many of the more important mountains will be found either under their own names, in the articles on the several counties, or in those which treat of the Grampians, the Ochils, etc.

Ht.	Name.	County.
4406	Ben Nevis,	Inverness.
4296	Ben Muich Dhui,	Aberdeen.
4248	Braeriach,	Aberdeen & Inverness.
4241	Cairntoul,	Aberdeen.
4084	Cairngorm,	Aberdeen & Inverness.
4060	Aonach Beag,	Inverness.
4004	Ben Lawers (*with Cairn*),	Perth.
3999	Aonach Mor,	Inverness.
3961	Carn Dearg (Ben Nevis),	Inverness.
3924	Benabourd or Beinn a' Bhuird,	Aberdeen.
3890	Bensheasgarnich,	Perth.
3862	Maam Suil or Mam Sodhail,	Ross & Inverness.
3843	Ben Avon,	Aberdeen.
3827	Benein or Am Binnein,	Perth.
3795	Beinn Bhrotain,	Aberdeen.
3786	Lochnagar,	Aberdeen.
3773	Sgurr na Lapaich,	Ross & Inverness.
3771	Sgurr nan Ceathreamhnan,	Ross & Inverness.
3766	Benveedan or Beinn Fhada (Bidean nam Bian),	Argyll.
3757	Ben Alder or Ben Auler,	Inverness.
3750	Nameless summit W of Stob Ban,	Inverness.
3726	Carn an Fhidleir,	Perth.
3708	Benloy (Beinn Laoigh),	Perth & Argyll.
3700	Binnein Mor,	Inverness.
3700	Creag Meaghaidh,	Inverness.
3696	An Riabhachan,	Ross.
3689	Ben Cruachan,	Argyll.
3673	Garbhleac,	Ross & Inverness.
3671	Benglo (Carn Gabhar),	Perth.
3658	Sgor an Dubh,	Inverness.
3658	Stob Choire an Easain Mhor,	Inverness.
3651	Monadh Mor,	Inverness & Aberdeen.
3646	Tom a' Choinich,	Ross & Inverness.
3646	Aonach Bea,	Inverness.
3637	Sgurr Mor,	Ross.
3634	Sgurr nan Conbhairean,	Ross & Inverness.
3621	Stob an t Sluichd,	Aberdeen.
3614	Sgurr nan Ceathreamhnam,	Inverness.
3611	Beinn Eibhinn,	Inverness.
3601	Sgor a' Mhaim,	Inverness.
3574	Caiplich,	Inverness.
3569	Beinn a' Chlachair,	Inverness.
3556	Carn Eas,	Aberdeen.
3554	Sgurr a' Choir Ghlais,	Inverness & Ross.
3553	Beinn a' Chaoruinn,	Aberdeen.
3547	Beinn Dearg,	Ross.
3547	Schiehallion,	Perth.
3545	Stob Coire an Easain,	Inverness.
3541	Ben Starav,	Argyll.
3540	Ben Creachan,	Perth & Argyll.
3530	Ben Heasgarnich,	Perth.
3523	Ben Doran or Doireann,	Argyll.
3505	Sgurr Fhuaran (Scour Ouran)	The highest part of Benmore, Ross.
3500	Sgurr nan Clach Geala,	Ross.
3497	Stob Coire an Lochan,	Perth.
3484	Cairn na Glashd,	Forfar & Aberdeen.
3483	Bideinn a' Ghlas Thuill (Tealach or Tallich),	Ross.
3474	Sgurr Fiona,	Ross.
3456	Spidean a'Choire Leith(Liathach)	Ross.
3452	Tuill Creagach,	Inverness.
3452	Sgurr a' Chaoruinn,	Ross.
3445	Glas Thulachan,	Perth.
3443	Carn Ban,	Inverness.
3443	Mullah Coire Iubhair,	Inverness.
3437	Beinn a' Chaoruinn (South),	Inverness.
3433	Cnoc Dearg,	Inverness.
3429	Ben Wyvis (Beinn-Uabhais),	Ross.
3424	Beinn Iutharn Mhor,	Aberdeen & Perth.
3421	Meall nan Tarmachan,	Perth.
3419	Carn Mairg,	Perth.
3410	Sgor na Ciche,	Inverness.
3407	Meall Ghaordie,	Perth.
3401	Sgurr na Lapaich (Maam Suil),	Inverness.
3399	Ben Achallader,	Perth.
3395	Gleourach,	Inverness.
3391	Carn Dearg,	Inverness.
3383	Beinn Fhada, *i.e.*, Ben Attow,	Ross & Inverness.
3382	Am Bodach,	Inverness.
3378	Sgurr a Bhealaich Dheirg,	Ross & Inverness.
3377	Carn an Righ,	Perth.
3370	Carn Gorm,	Perth.
3365	Sgurr a' Mhoraire,	Inverness.
3362	Benavere or Ben a' Bheithir,	Argyll.
3354	Beinn Chaluinn,	Perth.
3353	Beinn Liathach,	Ross.
3345	Buachaille-Etive,	Argyll.
3342	Aonach air Chrith,	Inverness & Ross.
3338	Meall Tionail,	Inverness.
3333	Beinn Bheoil,	Inverness.
3317	The Saddle,	Inverness & Ross.
3314	Cairn Bannoch,	Forfar.
3309	Beinn Eige (Ben Eay),	Ross.
3306	Ben Udlaman,	Perth.
3305	Creag Mhor,	Perth.
3304	Ben Dearg,	Perth.
3300	An Sgarsoch,	Perth & Aberdeen.
3298	Carn Liath,	Inverness.
3294	Maoile Lunndaidh,	Ross.
3294	Beinn Fionn Laidh,	Ross.
3290	Sgor Mhor,	Inverness.
3282	Sgurr an Lochain,	Inverness.
3276	A'Chailleach,	Ross.
3274	Stob Ban,	Inverness.
3273	Benmore-Assynt,	Sutherland's highest p'k.
3268	Broad Cairn,	Forfar.
3268	Meal Dubh Achadh,	Inverness.
3260	Sgurr Choinich,	Ross.
3250	An Cearcallach,	Inverness.
3250	Mullach Coire Mhic Fhearchair,	Ross.
3242	Beinn Eunaich,	Argyll.
3241	Carn Fuaralach,	Ross & Inverness.
3238	Craig Leacach,	Perth.
3234	Highest peak in Skye,	Inverness.
3234	Lurg Mhor,	Ross.
3234	Coniveall (Coinncomheall),	Sutherland.
3224	Culvain,	Argyll.
3224	Ben Vorlich,	Perth.
3222	Tigh Mor,	Inverness.
3218	Ciste Dhubh,	Ross & Inverness.
3217	Bensleoch (Bensliabhoch),	Ross.
3215	Benchochail or Beinn a'Chochuill	Argyll.
3214	Maol Cheann dearg,	Ross & Inverness.
3204	Beinn Dubh Chraige,	Perth.
3194	Carn Geoidh,	Perth.
3193	Carn Liath,	Perth.
3192	Ben Lomond,	Stirling.
3188	Sgurr Ban,	Ross.
3185	Benmore,	Argyll (Mull's high. pk).
3184	Stuc a Chroin,	Perth.
3175	Bruach nan Iombrean,	Perth.
3167	Scuir na Gillean,	Inverness (Skye).
3167	Sgurr na Banachdich,	Inverness (Skye).
3164	Sgor Choileam,	Inverness.
3154	Meall an Eoin (peak of Bencli-brick or Beinn Cleith-Bric),	Sutherland.
3148	Stob Garbh,	Perth.
3143	Tolmount,	Forfar.
3141	Sgurr Ruadh,	Ross.
3141	Ben nan Aighean,	Argyll.
3128	Sgur Gaibhre,	Perth.
3125	Sgor nan Coireachan,	Inverness.
3125	Ben Vannoch,	Perth.
3113	Duncrub,	Dumbarton.
3105	Driesh,	Forfar.
3102	Creag a' Mhaim,	Ross.
3101	Ben-a'-Chroin,	Perth.
3099	Ben Tulachan,	Perth.
3098	Sgurr na Sgine,	Ross & Inverness.
3092	Ben Vorlich,	Dumbarton.
3087	Carn na Caim,	Perth.
3087	Carn Mairg,	Inverness.
3084	Carn Dearg,	Perth.
3083	Binnein Beag,	Inverness.
3082	Sgurr na Creige,	Ross & Inverness.
3077	Mount Keen,	Forfar.
3077	Mullach nan Coirean,	Inverness.
3074	Beinn Dheiceach,	Perth.
3066	Beinn na Lap,	Inverness.
3066	Sron a Coire Ghairbh,	Inverness.
3062	Meall a' Chrasgaidh,	Ross.
3060	Fionn Bheinn,	Ross.
3060	Mealfourvonie,	Inverness.
3060	Meall a Chinn Deirg,	Ross.
3058	Sgurr an Tuill Bhain,	Ross (Ben Sguliaird).
3048	Ben Chonzie,	Perth.
3045	A'Chailleach,	Inverness.
3043	Mayar,	Forfar.
3040	Ben Hope,	Sutherland.
3039	Eididh nan Clach Geala,	Ross.
3037	Glas Meall Mhor,	Perth.
3036	Geal Charn,	Inverness (Glen Markie).
3034	Beinn Liath Mhor,	Ross.
3031	Creag Peathraich,	Inverness.
3026	Moruisg,	Ross.
3015	Scour Gairoch,	Inverness.
3015	Benalligin,	Ross.
3015	Carn Sgulain,	Inverness.
3014	Carn Bhac,	Perth.
3012	Creag nan Damh,	Inverness.
3008	Ben a' Chlaibh,	Argyll & Perth.
3006	A'Ghlas Bheinn,	Ross.
3006	Carn Bhinnein,	Perth.
3005	Gealcharn,	Inverness (E of L. Ericht)
3004	Ben Vane,	Dumbarton.
3000	Sgurr Breac,	Ross.
3000	Stac Meall na Cuaich,	Inverness.
2980	Foinaven,	Sutherland.
2891	Ben Arthur or The Cobbler,	Argyll.
2875	Ben Ledi,	Perth.
2866	Goat Fell,	Bute (Arran).
2779	Canisp,	Sutherland.
2764	Merrick,	Kirkcudbright (highest in southern Scotland).
2757	Ben Vrackie,	Perth.
2399	Suilven (Sugarloaf),	Sutherland.
2393	Ben Venue,	Perth.
822	Arthur's Seat,	Edinburgh.
612	North Berwick Law,	Haddington.

LAKES.

It would be tedious to enumerate that marvellous multitude of lakes which constitutes one of the striking features of Scotland, especially in its northern divisions. They vary in size from Loch Lomond, with its area of 28 square miles, down to the nameless and pool-like tarn on the mountain-top. While several are world-famous for the beauty of their scenery, and year by year attract a growing crowd of tourists, hundreds lie silent and unseen save by the adventurous sportsman, and are chronicled by no laborious topographer. A glance at some of the sheets of the Ordnance Survey, such as No. 5, will show how in some parts the country is studded with them. The principal lakes, for extent or scenic attractions, are Ken, drained by a stream of the same name, the chief affluent of the southern Dee; Skene, 1300 feet above sea-level, drained by a remote affluent of the Annan, forming the magnificent waterfall called the Grey Mare's Tail; St Mary's Loch, and the Loch of the Lows, drained by the classic Yarrow, a subtributary of the Tweed; Doon, drained by the stream of the same name; Lomond, drained by the western Leven, a tributary of the Clyde; Leven, drained by the eastern Leven; Conn and Ard, drained by the Forth; Katrine, Achray, Vennachoir, Voil, and Lubnaig, drained by the Teith, the chief affluent of the Forth; Tay, Earn, Lydoch, Ericht, Rannoch, Tummel, Garry, Lows, Clunie, and Quiech, drained by the Tay and its affluents; Loch Lee, drained by the North Esk; Awe, Avick, Shiel, and Eck, south of the central mountain range, and near the west coast; Laggan, Ouchan (or Ossian), and Treag, drained by the Spean; Lochy and Archaig, drained by the Lochy into Loch Eil; Garry, Oich, Ness, and Ruthven, drained by the Ness into the Beauly Firth; Duntalliak, drained by the Nairn; Affrick, drained by the Beauly; Maree, Fionn, Shallag, Fannich, Rusk, Luichart, Monar, Glas, Moir, and Slin, in Ross-shire; Shin, Naver, Furan, Baden, Loyal, and More, in Sutherland; and Stenness, in the Mainland of Orkney.

The following table gives details in regard to a few of the larger lakes:

Lake.	County.	River System (if any).	Length.	Breadth.	Area. Acres.	Max. Depth.	Height above the Sea.
Lomond, .	Stirling & Dumbarton.	Clyde & Leven.	22 m.	5 m. max.	17,420	630 ft.	23 ft.
Ness, . .	Inverness.	Ness.	22½ m.	1 m.	12,355	780 ft.	50 ft.
Awe, . .	Argyll.	Awe.	22⅜ m.	3 furl. to 3¼ m.	9,995	102 ft.	118 ft.
Shin, . .	Sutherland.	Shin.	17½ m.	¼ to 1½ m.	..	..	270 ft.
Maree, . .	Ross.	Ewe.	12⅝ m.	3 furl. to 2½ m.	7,090	360 ft. av.	32 ft.
Tay, . .	Perth.	Tay.	14½ m.	1⅛ m. max.	6,550	..	553 ft.
Archaig, . .	Inverness.	Lochy.	12 m.	⅜ m.	3,976	..	140 ft.
Shiel, . .	Inverness & Argyll.	....	17½ m.	1 m. max.	4,880	..	..
Lochy, . .	Inverness.	Lochy.	9⅜ m.	1 to 9¾ furl.	..	..	93 ft.
Monar, . .	Inverness & Ross.	Beauly.	4¼ m.	3⅜ m.	..	..	663 ft.
Fannich, .	Ross.	Conan. [Ericht.	6⅝ m.	3 to 7 furl.	..	..	822 ft.
Ericht, . .	Perth & Inverness.	Tay, Tummel,	14⅜ m.	¼ m. to 9 furl.	..	..	1153 ft.
Naver, . .	Sutherland.	Naver.	6¼ m.	4½ furl. max.	1,444	98 ft.	247 ft.
Earn, . .	Perth.	Tay & Earn.	6⅜ m.	6 furl.	2,118	600 ft.	306 ft.
Rannoch, .	Perth.	Tay & Tummel.	9⅜ m.	2 to 9 furl.	..	50-60 ft. av.	668 ft.
Stenness, .	Orkney.	....	4½ m.	1¾ m. max.	..	..	..
Leven, . .	Fife.	Leven.	3⅜ m.	2 m. max.	3,406	90 ft.	353 ft.
Ken, . .	Kirkcudbright.	Ken.	4½ m.	200 to 800 yds.	..	..	145 ft.
Lydoch, . .	Perth & Argyll.	Tay.	5½ m.	½ m. max.	..	..	924 ft.
Fionn or Fuir,	Ross.	Greinord.	5⅜ m.	½ furl. to 1¼ m.	2,238	..	559 ft.
Loyal (Laoghal)	Sutherland.	Borgie.	4⅜ m.	7 furl.	1,623	..	369 ft.
Katrine, . .	Stirling & Perth.	Forth & Teith.	8 m.	7½ furl.	3,119	468 ft.	364 ft.

RIVERS.

As the prevailing rocks throughout a large part of Scotland are of the more impervious sort, most of the abundant rainfall of the country finds its way to the sea by sub-aerial or surface channels; and it is only during a brief portion of the year that evaporation is powerfully at work. The running waters are consequently almost countless, every little Highland glen and every little Lowland valley having its burn or brooklet. If we divide the country into an eastern and western versant according as it discharges eastward into the so-called North Sea, or northward and westward into the Atlantic and its inlets, we find that the former is generally very much more extensive in all the northern division, and that for reasons already explained. The watershed or water-parting, which may be said to begin at Duncansbay, follows an extremely tortuous course through Caithness and Sutherland, till, between Loch an Urchoill, discharging into Glencoul, and Loch nan Breac Mora, belonging to the Oikell system, it is only 3 or 4 miles from the sea on the west side of the island. In its course southward through Ross-shire it lies somewhat nearer the centre of the county (Dirrie Muir, 900 feet), but in Inverness-shire it again approaches very near the west coast, till turning eastwards it crosses the Great Glen between Lochs Lochy and Oich, and running between the basins of the Spey and the Spean again proceeds southward near the borders of Perthshire and Argyll. In the division south of the great estuaries of the Clyde and Forth the partition between East and West is much more even. The following table shows the names and sizes of the principal rivers and streams:

NAME.	Height above Sea of Source.	Area of Basin.	Counties partly including—	Head of Navigat. and Tidal Reach.	Length of Course.
Tweed,	1500 ft.	1870sq.m. Partly in England.	Peebles, Selkirk, Edinb., Roxb'rgh, Berwick, Haddington, Northumb'land.	Berwick, 10 to 12 m.	97 m.
ETTRICK,	1900 ft., Capel Pen.	....	Selkirk.	....	32⅝ m.
Yarrow,	695 ft., St Mary's Loch.	....	Selkirk.	....	14½ m.
TEVIOT,	1300 ft.	....	Roxburgh.	....	37¼ m.
Jed,	1500 ft., Carlin Tooth.	....	Roxburgh.	....	21¾ m.
TILL,	An English confluent receiving the Bowmont from Scotland.	....	.....	....	40 m.
Bowmont,	.....	....	Roxburgh (Northumb'land).	....	20 m.
LYNE,	1250 ft.	....	Peebles.	....	18¾ m.
EDDLESTON,	880 ft.	....	Peebles.	....	9 m.
GALA WATER,	1100 ft., Moorfoot Hills.	....	Edinb., Selkirk, Roxburgh.	....	21 m.
LAUDER OR LEADER,	1375 ft., Lammer Law.	....	Berwick, Roxburgh.	....	21½ m.
WHITADDER,	.....	....	Haddington, Berwick.	....	34 m.
Forth,	3000 ft., Duchray Water (Ben Lomond). 1900 ft., Avondhu.	645 sq. m.	Stirling, Perth, Clackmannan, Linlithgow, Edinburgh, Kinross, Fife.	Stirling, 52¾ m.	116½ m.
BANNOCK BURN,	1250 ft.	....	Stirling.	....	14 m.
CARRON,	1000 ft., Carron Bog.	....	Stirling.	....	20 m.
LEITH, WATER OF,	1250-1400 ft., Pentlands.	....	Edinburgh.	....	24 m.
SOUTH ESK,	1700 ft., Blackhope Scar (Pentlands).	....	Edinburgh.	....	23 m.
North Esk,	Moorfoot Hills.	....	Edinburgh.	....	17 m.
TEITH,	1750 ft.	....	Perth.	....	34 m.
ALLAN,	Little Corum (Ochils).	....	Perth, Stirling.	....	20 m.
DEVON,	1800 ft., near Bencleuch (Ochils).	....	Perth, Kinross, Clackmannan, Stirling.	....	33¾ m.
LEVEN,	353 ft., Loch Leven.	153 sq. m.	Kinross, Fife.	....	16 m.
Ore,	.....	....	Fife.	....	17 m.
Eden,	300 ft.	....	Fife.	....	29½ m.
Tay,	2980 ft., Benbuy.	2400 sq. m.	Perth, Forfar.	Perth.	119⅝ m.
BRAN,	.....	....	Perth.	....	19 m. (incl. Quaich).
ALMOND,	2750 ft.	....	Perth.	....	30 m.
EARN,	306 ft., Loch Earn.	....	Perth.	Bridge of Earn.	46¼ m.
LYON,	2400 ft.	....	Perth.	....	34¼ m.
TUMMEL,	480 ft., Loch Tummel.	....	Perth.	....	29 m.
Garry,	1330 ft., Loch Garry.	....	Perth.	....	22 m.
Tilt,	1650 ft., Loch Tilt.	....	Perth.	....	15⅜ m.
ISLA,	3100 ft., near Lochnagar.	....	Forfar, Perth.	....	37 m.
South Esk,	3150 ft.	....	Forfar.	....	29 m.
North Esk,	820 ft.	....	Forfar.	....	48¾ m.
Dee,	4060 ft., Cairngorm.	700 sq. m.	Aberdeen, Kincardine.	....	87⅛ m.
Don,	1980 ft., near Meikle Geal Charn.	530 sq. m.	Aberdeen.	....	82¼ m.
URY,	East of Strathbogie.	....	Aberdeen.	....	18 m.
Ythan,	768 ft., Ythan Wells.	....	Aberdeen.	....	35½ m.
Deveron,	1847 ft., Cabrach.	....	Aberdeen, Banff.	....	61⅜ m.
BOGIE,	.....	....	Aberdeen, Banff.	....	14 m.
Spey,	1142 ft., Loch Spey.	1190 sq. m.	Inverness, Elgin, Banff.	....	96 m.
AVON,	2250 ft., Loch Avon (Cairngorm).	....	Banff.	....	27¾ m.
DULNAIN,	2600 ft., Monadhliath.	....	Inverness.	....	28 m.
Findhorn,	2800 ft., Monadhliath.	....	Inverness, Nairn, Elgin.	....	62½ m.
Nairn,	2500 ft., Carn Griohgair.	....	Inverness, Nairn.	....	38 m.
Beauly,	Affric Drumalban.	324 sq. m.	N.W. Inverness.	....	40 m.
CANNICH,	Loch Moyley.	....	Inverness.	....	24 m.
FARRER,	.....	....	Inverness.	....	27½ m.
Conan,	.....	....	Ross and Cromarty.	....	12¼ m.
Oikell,	1500 ft.	300 sq. m.	Sutherland, Ross.	Rosehall.	35¼ m.
CARRON,	.....	....	Ross and Cromarty.	....	9 m.
SHIN,	270 ft., Loch Shin.	....	Sutherland.	....	78 m.
Helmsdale or **Ilie**,	770 ft., Loch Leum a' Chlam Lain.	....	Sutherland.	....	27½ m.
Thurso,	Loch More.	....	Caithness.	....	27 m.
Naver,	247 ft., Loch Naver.	....	Sutherland.	....	18⅞ m.
Clyde (Daer Water),	2000 ft., Gana Hill.	1480 sq. m.	Lanark, Renfrew, Stirling, Dumbarton.	Glasgow, 14 m.	106 m.
MEDWIN,	1230 ft.	....	Lanark.	....	15 m.
CALDER,	1000 ft., Elrig Moss.	....	Lanark.	....	10 m.
KELVIN,	160 ft.	....	Stirling, Dumb'rton, Lan'rk.	....	21 m.
LEVEN,	23 ft., Loch Lomond.	....	Dumbarton.	3 m.	7¼ m.
DOUGLAS,	1500 ft., near Cairntable.	....	Lanark.	....	20 m.
AVON,	Distinkhorn Hill.	....	Lanark.	....	24½ m.
CART,	.....	....	Renfrew.	Paisley.	19 m.
Irvine,	810 ft., near Drumclog.	....	Ayr.	....	29½ m.
Annick,	.....	....	Renfrew, Ayr.	....	16 m.
Garnock,	1600 ft., Mistylaw Hills.	....	Ayr.	....	21⅛ m.
CESSNOCK,	980 ft., Auchmannoch Muir.	....	Ayr.	....	14 m.
Ayr,	1200-1500 ft., Muirkirk.	....	Ayr.	....	38 m.
LUGAR,	1600 ft., Glenmore Water.	....	Ayr.	....	22⅛ m.
Doon,	680 ft., Loch Doon.	....	Ayr.	....	26½ m.
Dee,	750 ft., Loch Dee.	....	Kirkcudbright.	Tongland, 8 m.	38½ m.
KEN,	1870 ft.	....	Kirkcudbright.	....	28½ m.
Nith,	1400 ft., Enoch Hill and Prickeny Hill.	....	Dumfries, Ayr, Kirkcudbright.	....	70¾ m.
SCAR,	1600 ft.	....	Dumfries.	....	18⅜ m.
CLUDEN,	Cairn.	....	Kirkcudbright, Dumfries.	....	23 m.
Annan,	1200 ft.	....	Dumfries.	....	49 m.
EVAN,	1000 ft.	....	Lanark, Dumfries.	....	16½ m.
AE,	.....	....	Dumfries.	....	16 m.
Moffat Water,	1800 ft.	....	Dumfries.	....	14 m.
Milk Water,	780 ft.	....	Dumfries.	....	17¾ m.
Esk,	2000 ft., Ettrick Pen (White Esk).	....	Dumfries.	....	36¾ m.
Ewes,	Tudhope Hill.	....	Dumfries.	....	11⅞ m.
Tarras,	1748 ft., Hartsgarth Fell.	....	Dumfries.	....	11 m.
Liddel,	650 ft., Dead Water Bog.	....	Roxburgh, Dumfries.	....	26¾ m.

ISLANDS.

The islands of Scotland were at the census of 1861 ascertained to number 787, by the word island being understood any piece of solid land surrounded by water, which affords sufficient vegetation to support one or more sheep, or which is inhabited by man. Some of the uninhabited islands have pasturage for 300 or 400 sheep; others again only admit of one sheep being left at one time. The Hebrides extend for 205 miles along the west coast, and consist of about 160 islands and islets, of which 100 are inhabited. Another archipelago, the Orkneys, numbering 52 considerable islands, though only 28 are permanently inhabited, is separated from the north-western extremity of Caithness by the Pentland Firth, 6 miles broad; and a third archipelago, that of Shetland—100 islands, 29 permanently inhabited—is 48 miles north-north-east of Orkney. Islands not belonging strictly to any group are Mugdrum (32 acres), in the Firth of Tay; the Isle of May (146¼), Inchkeith, Cramond, Inchcolm, Inchgarvie, Inchmickery, Craigleith, Lamb, Fidra, and the Bass Rock, in the Firth of Forth; and Arran, Bute, Great Cumbrae and Little Cumbrae, Sanda, Devar, Pladda, Holy Isle, and Ailsa Craig, in the Firth of Clyde. Of seaward rocks, the chief are Carr, a reef 1 mile north-north-east of Fife Ness; the Bell Rock or Inchcape, a reef 11¾ miles south-east of Arbroath.

The following table gives the areas and population of the more important islands:

Name.	Area.		Pop. 1881.	Name.	Area		Pop. 1881.
	Square Miles.	Acres.			Square Miles.	Acres.	
Long Island, *i.e.*, Lewis & Harris,	859	549,887	28,339	Egilsay (Orkney),	2.55	1,636	155
Lewis (Ross),	683	437,221	24,876	Muck (Argyll),	2.4	1,585.940	51
Skye (Inverness),	643.28	411,703.652	16,889	Mingalay (Inverness),	2.44	1,562.760	150
Mull (Argyll),	347.21	222,214.868	5,229	Ronay (North Uist, Inverness),	2.3	1,531.810	6
Mainland (Shetland),	..	242,310	20,821	Monach Island (Inverness),	2.3	1,495.966	13
Islay (Argyll),	246.6	157,851.449	7,559	Kirkibost (Inverness),	2.2	1,450.061	12
Pomona (Orkney),	206.9	132,477	17,165	Gometra (Argyll),	2	1,284.907	30
Harris (Inverness),	176.7	113,142.177	3,463	St Kilda (Inverness),	1.9	1,200	77
Arran (Bute),	168.08	107,572.774	10,998	Shuna (Inverness),	1.83	1,173.560	118
Jura (Argyll),	142.9	91,516.772	773	Graemsay (Orkney),	1.8	1,152	236
North Uist (Inverness),	135.7	86,858.333	3,371	Wiay (Inverness),	1.6	1,057.500	5
Yell (Shetland),	82.69	52,923	2,529	Sanderay (Inverness),	1.6	1,053.130	10
Hoy (Orkney),	52.8	33,819	1,380	Vementry (Shetland),	1.5	960	..
Bute (Bute),	48.68	31,161.421	10,998	Isle of Noss (Shetland),	1.19	762	3
Unst (Shetland),	46.76	29,929	2,173	Fuday (Inverness),	1	760.170	6
Rum (Argyll),	41.85	26,785.790	89	Hascosay (Shetland),	1.17	751	..
Benbecula (Inverness),	35.7	22,873.783	1,661	Little Cumbrae (Bute),	1	722.914	23
Tiree (Argyll),	33.54	21,471.896	2,730	Trondra (Shetland),	1.12	722	133
Coll (Argyll),	30.6	19,596.508	643	Boreray (North Uist, Inverness),	1	717.513	137
Sanday (Orkney),	25.77	16,498	2,082	Lunga (Jura, Argyll),	1	699.558	17
Barra (Inverness),	25.1	16,117.688	1,869	Holy Island (Arran, Bute),	1.08	691.662	15
Westray (Orkney),	24.24	15,516	2,000	Inchmarnock (Bute),	1.05	675.054	18
Raasay (Inverness),	24.5	15,704.384	478	Erraid (Argyll),	1	642.481	51
South Ronaldsay (Orkney),	20.43	13,080	2,557	Killegray (Inverness),	..	626.090	6
Rousay (Orkney),	18.65	11,938	873	Pabbay (Barra, Inverness),	..	614.480	26
Colonsay (Argyll),	16.00	10,878.915	387	Calf of Eday (Orkney),	..	599	..
Fetlar (Shetland),	16.77	10,734	431	Uyea (Shetland),	..	598	5
Stronsay (Orkney),	15.3	9,840	1,274	Sanday (Argyll),	..	577.712	16
Eigg (Inverness),	12	7,803.717	291	Pabay (Strath, Inverness),	..	559.290	10
Eday (Orkney),	11.5	7,372	730	Oronsay (Morven, Argyll),	..	539.157	..
Shapinsay (Orkney),	11.2	7,172	974	Ensay (Inverness),	..	537.080	6
Bressay (Shetland),	10.81	6,919	847	Berneray (Barra, Inverness),	..	460.920	72
Scalpay (Strath, Inverness),	10	6,489.830	37	Wiay (Inverness),	..	451.060	4
Lismore (Argyll),	9.39	6,014.579	621	Hellisay (Inverness),	..	384.240	9
Ulva (Argyll),	7.6	4,924.546	53	Sanda (Argyll),	..	381.500	14
Whalsey (Shetland),	7.62	4,881	870	Garbh Eileach (Argyll),	..	342.088	..
Baleshare (Inverness),	7.2	4,631.321	266	Stromay (Inverness),	..	348.090	..
Grimsay (Inverness),	7	4,505.223	292	Eilean Fladday (Inverness),	..	336.910	87
Muckle Roe (Shetland),	6.81	4,362	230	Torsay (Argyll),	..	275.060	10
Seil (Argyll),	5.96	3,820.344	661	Gighay (Argyll),	..	264.930	378
Luing (Argyll),	5.93	3,797.560	527	Gunna (Argyll),	..	260.190	..
Gigha (Argyll),	5.79	3,709.471	382	Eorsa (Argyll),	..	259.228	..
Scarba (Argyll),	5.74	3,675.493	19	Inch Kenneth (Argyll),	..	248.864	8
Taransay (Inverness),	5.69	3,601.770	55	Isay (Inverness),	..	234.320	..
Bernera(y) (Harris),	5.27	3,376.777	452	Hemetray (Inverness),	..	233.480	..
Foula (Shetland),	5.15	3,300	267	Fuiay (Inverness),	..	217.300	..
Kerrera (Argyll),	4.9	3,140.570	103	Soa (Argyll),	..	210	..
Great Cumbrae (Bute),	4.87	3,126.397	1,856	Cara (Argyll),	..	203.875	4
Burra, East and West (Shetland),	4.72	3,024	642	Muldoanich (Inverness),	..	203.530	..
Canna (Argyll),	4½	2,908.046	57	Cliasay Mor and Beg,	..	201.790	..
South Walls (Orkney),	4.46	2,855	..	Little Colonsay (Argyll),	..	200	..
Burray (Orkney),	4.19	2,683	685	Lunga (Argyll),	..	195.268	17
Flotta (Orkney),	4.15	2,661	425	Ascrib Islands (Inverness),	..	187	..
Soay (Inverness),	4.15	2,634.660	102	Eilean an Iasgaich (Inverness),	..	183.121	..
Rona (Portree, Inverness),	4	2,564.905	176	Tahay (Inverness),	..	171.600	..
Vatersay (Inverness),	3.9	2,519.320	19	Eileach an Naoimh,	..	169.270	..
North Ronaldsay (Orkney),	3.72	2,387	547	Longay (Inverness),	..	164.950	..
Eriskay (Inverness),	3.56	2,299.970	466	Stockinish (Inverness),	..	155.970	..
Iona (Argyll),	3½	2,264.285	243	Vaccasay (Inverness),	..	154.400	..
Pabbay (Harris, Inverness),	3.37	2,168.840	2	Texa (Islay, Argyll),	..	151.992	..
Oronsay (Colonsay, Inverness),	3.075	1,968.532	47	Nave (Argyll),	..	150.531	..
Fair Isle (Shetland),	3.02	1,939	214	Flodday More (Inverness),	..	149.580	..
Scalpa(y) (Harris, Inverness),	3	1,917.240	540	Flodday (North Uist, Inverness),	..	149.050	..

IV. GEOLOGY.

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of the Geological Survey of Scotland.

Those who have studied the geological history of Scotland will readily admit that there are ample materials in the records of the successive formations to arrest the attention and to stimulate research. During the present century, numerous investigators have ransacked these ancient archives with remarkable success, and though there are certain questions requiring further elucidation, it is possible, now, to construct a tolerably complete account of the geological history of the country.

In presenting such a review, it is interesting to remember that the story of our hills and valleys, as well as of the strata of which they are composed, suggested to Hutton those principles which led to the true interpretation of the past changes of the globe. He is justly regarded, not only as the founder of the distinguished Scottish School of Geology which flourished towards the beginning of this century, but also as the real founder of physical geology. The views promulgated by Hutton and advocated with so much force and eloquence by Playfair, regarding the physical history of the rocks in the earth's crust, are now universally admitted. With the aid of the brilliant light which they cast on this branch of the science, we are able to follow and explain those geographical revolutions which our country witnessed ere it assumed its present features. It is no doubt true that Hutton did not take cognisance of the grand series of organic remains embedded in the successive formations, by means of which we are able to realise, in some measure, the climatic conditions of the successive periods, and the gradual development of plant and animal life. The first step in this inquiry was reserved for his great English contemporary, William Smith. His researches among the Secondary rocks of England enabled him to establish a regular order of succession in the strata, and that particular zones were characterised by fossils peculiar to them. But notwithstanding the great achievements in different branches of the science since the time of Hutton, it is impossible to avoid expressing admiration for the services which he rendered to geological research and speculation. Recognising that the present is the key to the past, and that the geological agencies now in operation have been instrumental in bringing about changes during former periods, he placed geological reasoning on a sound scientific basis. He boldly suggested that the great bulk of the sedimentary rocks in the crust of the earth were formed of sand, clay and gravel, which had been deposited on the sea-floor, and that by subsequent pressure and subterranean heat, they had been converted into sandstones, shales and conglomerates. By means of the subterranean agencies they were elevated above the sea-level and had frequently been thrown into a series of great folds. He was also the first to show that granite and other crystalline rocks must originally have existed in a molten condition due to the action of heat, and that the molten material must have been injected in some cases in the form of veins into the surrounding sedimentary strata. He further contended that, under the influence of heat and pressure, sedimentary strata had been altered into various schistose rocks. By his brilliant researches, it may be said, that he advanced an explanation of the origin of the igneous, the sedimentary, and the metamorphic rocks of the earth's crust. But his observations led him to further important deductions. In his rambles through Scotland he found that gently inclined strata rested on the upturned edges of an older series, from which he inferred that the members of the older series had been upheaved, contorted, and denuded prior to the deposition of the younger group. In this way he was led to contemplate former revolutions in the earth's surface, and to see that the history of these changes could only be deciphered by a study of the rocks in the field and their relations to each other. Finally, he maintained that the various physical features of the country—the hills and valleys, crags and ravines—had been sculptured by the action of rain, running water, frost, and other simple agencies of denudation, and that this decay was part of the economy of nature. He declared that the materials worn off the land were being transported to the sea by running water, where they accumulated, till at some future time they were consolidated into hard rocks and elevated above the sea-level, only to pass anew through the same series of changes.

It is perhaps not to be wondered at that views so startling and original met with keen opposition. Like many men of genius, Hutton was far in advance of his time. His principles, however, were adopted, with certain modifications, and expounded by Sir Charles Lyell, and they have more recently been eloquently enforced by Dr Archibald Geikie. They are now the common stock of geologists over the world. They have been briefly referred to here, in order

that the general reader, who may have no special knowledge of the science, may follow more easily the remarkable history unfolded by the rocks of Scotland.

No better testimony could be advanced in support of Hutton's views regarding the powerful influence of denuding agencies in modifying the scenery of a country, than the preceding article by Professor James Geikie, on the 'Leading Physical Features' of Scotland. It is clearly shown that the three great belts into which Scotland may be divided—namely, the Highlands, the Central Lowlands, and the Southern Uplands—coincide with the geological structure of the country, and that the features which they present have been moulded by agents of erosion. The mountains of the Highlands and the hills of the Southern Uplands have been carved out of table-lands of vast geological antiquity, their characteristic contours being due to the manner in which the respective rock formations have been influenced by denudation. It is apparent, therefore, that some knowledge of the geological structure of the country and the rock formations is essential before one can fully appreciate the evolution of its physical features.

A striking feature connected with the geological history of Scotland is the remarkable development of Palæozoic rocks, compared with the relics of the Secondary formations. With the exception of certain limited areas of younger Palæozoic strata, the Southern Uplands, extending from St Abbs Head to Portpatrick, are formed of rocks of Silurian age. The Central Lowlands are occupied by Old Red Sandstone, Carboniferous, and Permian strata; while the Highlands are composed mainly of crystalline schists, gneiss, and quartzites, the age of which it is impossible to define with certainty, in the present state of our knowledge. It will be shown presently that they probably comprise rocks of Archæan age, along with strata belonging to the Cambrian and Silurian periods. The representatives of the Secondary formations occurring on the north-east coast, and also along the western seaboard of the Highlands, are mere fragments which have escaped denudation. They have been preserved to us partly by means of great dislocations which have brought them into conjunction with older strata, and partly by vast accumulations of Tertiary volcanic rocks which have overspread them and saved them from complete demolition. Notwithstanding these aids to their preservation, the record of the Secondary formations is by no means complete. Still, the deposits are of great interest and importance, as they enable the geologist to correlate them with the splendid development of Secondary formations in England, and to trace the variations in the order of succession of the strata, as well as in the included fauna and flora. The Tertiary Period is represented mainly by an extraordinary development of volcanic rocks associated with certain leaf-beds, the whole series forming one of the most interesting chapters in the geological history of the country. The following table will enable the reader to grasp the chronological order of the rock formations, and to see wherein the record is defective.

TABLE OF FORMATIONS IN SCOTLAND.

Post-Tertiary,	Recent and Post-Glacial,	Alluvium, peat, estuarine beds, raised beaches, torrential gravels, moraines of local glaciers.
	Pleistocene or Quaternary,	Glacial, inter-glacial, and pre-glacial deposits, consisting of boulder clays, moraines, sands, gravel and clays, etc.
Tertiary or Cainozoic,	Pliocene,	Absent.
	Miocene,	Great development of contemporaneous and intrusive volcanic rocks, with associated leaf-beds.
	Eocene,	Absent.
Secondary or Mesozoic,	Cretaceous,	White chalk, with flints. Upper Greensand. Gault—absent. Lower Greensand—absent. Wealden Beds—absent.
	Jurassic,	Upper Oolite. Middle Oolite. Lower Oolite. Upper Lias. Middle Lias. Lower Lias.
	Triassic,	Sandstones, cherty limestones, etc.

Primary or Palæozoic	Permian		Sandstones, breccias with contemporaneous volcanic rocks.
	Carboniferous		Red sandstones. Coal-measures. Carboniferous Limestone. Calciferous Sandstone.
	Old Red Sandstone		Upper Division. Lower Division.
	Silurian	Upper	Ludlow. Wenlock. Llandovery.
		Lower	Caradoc. Llandeilo.
	Cambrian		Conglomerates and sandstones.
	Archæan		Gneiss, crystalline schists, limestones with pegmatite and granite veins.

In the far north-west of the counties of Sutherland and Ross, the oldest rocks of Scotland belonging to the Archæan series are characteristically developed. They occupy a belt of ground along the coast, stretching from Cape Wrath to Loch Torridon, and are to be met with in Rona, the north part of Raasay, Coll, Tiree, and in the Outer Hebrides. Throughout these areas their lithological characters are remarkably uniform. The dominant member of the series consists of massive hornblendic gneiss, with zones of pink and grey granitoid gneiss, intersected in all directions with veins of pegmatite. Bands of hornblende-schist and hornblende-rock are associated with the coarse gneisses; and in the neighbourhood of Scourie these hornblende-rocks are abundantly charged with garnets. According to the researches of Dr A. Geikie, it appears that these strata are succeeded by a series of flaggy or thin-bedded gneisses, with mica-schists and sericite-schists, which are further distinguished by a remarkable diminution in the number of pegmatite veins. The prevalent strike of this Archæan series is north-west and south-east, but this direction is by no means universal. As the strata are repeated by numerous folds, it frequently happens that the strike of the beds, as they curve round the low arches, is north-east and south-west—a feature which has been noted in Sutherlandshire and in the Outer Hebrides. Partly on account of their lithological characters, and partly because they were succeeded by Cambrian and Lower Silurian strata, these crystalline gneisses were regarded by Sir Roderick Murchison as the equivalents of the Lawrentian formation of Canada. No trace of organic remains has been found in these rocks in the north-west of Scotland, nor, indeed, can it be said that they present any traces of a sedimentary origin. If it be true—as suggested by Hutton, and advocated by Murchison and others—that they are merely the altered representatives of ancient sedimentary deposits, it must be admitted that, as a whole, they are now highly crystalline.

Following the view strenuously maintained by Murchison, geologists generally believed that these Archæan rocks were confined to the maritime districts of the west of Sutherlandshire and Ross-shire and the outlying islands. The crystalline schists of the Highlands were considered to be younger than the Silurian limestones of Durness and Assynt, because the latter appear to pass conformably upwards into the former. Murchison contended that the eastern schists, which overlie the fossiliferous limestones, possess different lithological characters from the Archæan series along the western seaboard, and, further, that their prevalent strike is north-east and south-west, or nearly at right angles to that of the Archæan gneiss. On the other hand, the late Professor Nicol of Aberdeen maintained that there is no conformable passage from the Silurian limestones into the overlying schists, and that the latter, as well as the schists of the Central Highlands, are of Archæan age. Since these conflicting views were first announced about thirty years ago, the order of succession of the strata in the north-west of Scotland has been the most keenly-controverted question in British geology. Again and again eager investigators have attacked the relations of the rocks, and within the last few years the controversy has been re-opened with renewed vigour by Dr Hicks, Dr Callaway, Professor Lapworth, and others, who, while opposing Murchison's views, advance different solutions of the problem. When it is borne in mind that the crystalline schists of the Highlands and the associated igneous rocks cover an area of about 15,000 square miles, it will be seen that the solution of the question is of far-reaching importance.

From the researches of the Geological Survey in the region of Durness and Eriboll during 1883 and 1884, it is now frankly admitted that there is no evidence in favour of a conformable upward succession from the Silurian limestones into the overlying crystalline schists. The detailed examination of that region clearly shows that the rocks have been affected by one grand series of terrestrial movements, which have produced enormous displacements of the strata. These mechanical movements likewise superinduced new structures in the strata lying to the east of the Silurian rocks of Eriboll. It will be more convenient, therefore, to refer to the characters and order of succession of the eastern schists after the Cambrian and Silurian rocks of the North-West Highlands have been described.

Resting with a violent unconformability on the Archæan gneiss of the west coast, there is a great development of red grits and sandstones, forming some of the most picturesque mountains in Scotland. Few observers who have seen these mountains will fail to recall the graphic descriptions by Hugh Miller (*The Old Red Sandstone*, 1879, pp. 53 and 329), who included them in the domain of the Old Red Sandstone. That this view was erroneous, was clearly proved by the independent observations of Professor Nicol and Sir Henry James. They showed that the red sandstones were *unconformably overlain* by the quartzites and fossiliferous limestones, and that if the latter were of Silurian age, then the former must clearly be of an older date. No fossils have as yet been found in these red sandstones. Murchison, however, regarded them as the equivalents of the Cambrian rocks of Wales,—partly on lithological grounds, and partly because they were demonstrably older than the Lower Silurian rocks of Sutherland—a view which has been generally adopted by geologists. These deposits are traceable from the wild headlands near Cape Wrath to the mountains of Applecross, and onwards to Skye, and throughout that region they give one a vivid impression of the vast denudation which they have undergone. Over wide areas the strata are nearly flat; in the mountains of Applecross and near Cape Wrath they have a gentle inclination to the west; but where they are overlain by the Silurian rocks, they generally dip in a south-easterly direction.

These Cambrian sandstones are succeeded by an important group of strata, comprising quartzites and lime-

stones, which have become widely known ever since the discovery of Lower Silurian fossils in the latter by Mr C. W. Peach in 1854. They extend continuously from Eriboll on the north coast of Sutherland to Skye—a distance of 90 miles. Sometimes they rest on the denuded edges of the Cambrian sandstones, sometimes on a platform of Archæan gneiss. Hence it is evident that, prior to the deposition of the Silurian sediments, there must have been considerable erosion of the Cambrian strata. In the neighbourhood of Durness and Eriboll the Silurian rocks are typically developed; indeed, the rich assemblage of fossils found in the limestones have only been found in the Durness basin. The following table gives the order of succession and the various subdivisions of the strata as recently worked out by us in the course of the Geological Survey of that district (see *Nature*, Nov. 13, 1884). They consist of (A.) an arenaceous series at the base; (B.) a middle series, partly calcareous and partly arenaceous; and (C.) a calcareous series at the top.

TABLE OF SILURIAN STRATA IN THE DURNESS-ERIBOLL REGION.

C. CALCAREOUS SERIES,	VII. DURINE GROUP,	Fine-grained, light grey limestones, with an occasional dark fossiliferous band.
	VI. CROISAPHUILL GROUP,	*c.* Fine-grained, cleaved, lilac-coloured limestones, full of flattened worm-casts; fossils distorted by cleavage. *b.* Alternations of black, dark grey, and white limestone, with an occasional fossiliferous band, like zone (*a*) of this group. *a.* Massive, dark grey limestone, chiefly composed of worm-casts which project above the matrix on weathered surfaces. Near the base are several lines of small chert nodules. This is one of the most highly fossiliferous zones in the Durness Basin.
	V. BALNAKEIL GROUP,	Alternations of dark and light grey limestone, highly fossiliferous, with occasional impure, argillaceous, unfossiliferous bands. Most of the beds are distinctly cleaved, and contain few worm-casts.
	IV. SANGOMORE GROUP,	Fine granular dolomites, alternating near the top with cream-coloured or pink limestone. Near the base are two or more bands of white chert, one of which is about 5 feet thick.
	III. SAILMHOR GROUP,	Massive, crystalline-granular, dolomitic limestones, occasionally fossiliferous, charged with dark worm-castings set in a grey matrix; large spheroidal masses of chert near the base. This limestone is locally known as 'the Leopard Stone.'
	II. EILEAN DUBH GROUP,	Fine-grained, white, flaggy, argillaceous limestones and calcareous shales. As yet no fossils have been found in this division.
	I. GHRUDAIDH GROUP,	Dark, leaden-coloured limestones, occasionally mottled, alternating near the top with white limestone. About 30 feet from the base there is a thin band of limestone charged with *Serpulites Maccullochii*, and a similar band occurs at the base.
B. MIDDLE SERIES (partly calcareous and partly arenaceous),	UPPER ZONE,	At the base lies a massive band of quartzite and grit, passing upwards into carious dolomitic grit, crowded in patches with *Serpulites Maccullochii*, more especially in the decomposed portions (Serpulite Grit).
	MIDDLE ZONE,	Alternations of brown, flaggy, calcareous, false-bedded grits and quartzites with cleaved shales.
	LOWER ZONE,	Calcareous mudstones and dolomitic bands, weathering with a rusty brown colour, traversed by numerous worm-casts, usually flattened, and resembling fucoidal impressions. These beds are often highly cleaved. This and the overlying zone form the 'Fucoid beds' of previous authors.
A. ARENACEOUS SERIES,	UPPER ZONE,	Fine-grained quartzites, perforated by vertical worm-casts and burrows, becoming more numerous towards the top of the zone ('pipe-rock' of previous authors). These beds pass downwards into massive white quartzites.
	LOWER ZONE,	False-bedded flaggy grits and quartzites, composed of grains of quartz and felspar. At the base there is a thin brecciated conglomerate, varying from a few inches to a few feet in thickness, containing pebbles of the underlying rocks, chiefly of quartz and orthoclase, the largest measuring about 1 inch across.

In the neighbourhood of Durness the Silurian strata form a basin, the greater part of which is occupied by the limestone series. It is bounded on the east side by a powerful fault that brings them in contact with the

Archæan gneiss, forming a prominent ridge of high ground extending from Rispond, at the mouth of Loch Eriboll, south by Ben Spionnu, Ben Arkle, and Ben Stack. On the west side of the basin, *the basal quartzites rest unconformably on the Archæan gneiss* owing to the removal of the Cambrian sandstones in pre-Silurian time by denudation. As the observer crosses the basin from west to east, he meets with an ascending series from the basal quartzites through the 'Fucoid beds' and 'Serpulite grit' to the limestones, which are overlain in Sangomore Bay by crystalline schists and gneiss. Though occupying a limited area in this bay and at Farrid Head, these schists are found again far to the east on the ridge between Eriboll and Tongue. A remarkable feature connected with the Durness limestones is the abundance of fossils in certain bands, comprising Annelids, Cephalopods, Lamellibranchs, Brachiopods, Trilobites, Corals, etc., the most celebrated localities being the Garbh Island, Port Odhair, Balnakeil Bay, and the ridge north of Keoldale. It is important to remember that, from an examination of the fossils found by Mr C. W. Peach many years ago, the late Mr Salter inferred that they were Lower Silurian, and strongly resembled a series of Lower Silurian fossils from North America.

The Silurian strata at Durness were originally continuous with those at Eriboll, but by means of dislocations the former slipped downwards for several thousand feet, and were disconnected from the latter. The geological structure of the Eriboll region is so interesting and so extraordinary that it is certain to become one of the classic spots in Scottish geology on account of the light which it throws on metamorphism. On the west side of the loch the Archæan gneiss is overlain unconformably by the basal grits and the quartzites pierced with annelid burrows known as the 'pipe rock;' whilst on the east shore, near Eriboll House, they are followed by the 'Fucoid beds,' 'Serpulite grit,' and the lowest limestone zones. Advancing eastwards it is observable that the strata are repeated by a remarkable series of folds and reversed faults, the effect of which is to bring lower over higher beds. The admirable sections along the coast from Whiten Head to Heilim furnish excellent opportunities for studying the effects of this peculiar system of faulting. The Silurian strata, ranging from the quartzites to the lowest limestone zone, are repeated again and again, till at the base of Ben Arnaboll the Archæan gneiss is brought up by a great reversed fault, and is seen resting on the quartzites and limestones. In other words the Silurian strata have been disrupted, and a slice of the old platform of gneiss on which they lay has been thrust upwards and driven horizontally forwards so as to lie like a cake on the fossiliferous rocks. It is obvious that this structure cannot be accounted for by a simple inversion as if we were to fold a pile of carpets back on themselves. It is no doubt true that the initial stage was characterised by the development of folds, but this movement gave place to reversed faults, and these again culminated in great horizontal displacements, which, for the sake of convenience, have been termed *Thrust-planes*.

These mechanical movements exercised a powerful influence on the Silurian strata and on the Archæan rocks. The quartzites and other fine-grained Silurian beds have been cleaved, the strike of the cleavage planes being parallel with that of the thrust-plane. In certain places the quartzites assume the character of quartz-schists owing to the development of mica along the cleaved surfaces. Near the thrust-plane the Archæan gneiss has been converted into a green slaty schistose rock, and, what is still more remarkable, new divisional planes have been developed parallel with that of the thrust-plane. At various localities, patches of the lowest zone of Silurian quartzites rest unconformably on this mass of Archæan gneiss, which, however, are traceable for no great distance as they are abruptly truncated by reversed faults. Further east, another thrust-plane supervenes and ushers in a series of strata presenting striking proofs of having been affected by these mechanical movements. Gently inclined to the east-south-east, and with a prevalent north-north-east strike, the following order of succession has been established in these beds:—(1.) striped fissile schist, with occasional wedges of Silurian quartzite next the thrust-plane; (2.) green schist with intercalations of Archæan gneiss, containing patches of Silurian quartzites and limestone; (3.) frilled schists with calcareous bands; (4.) siliceous schists; (5.) hornblendic and micaceous gneiss, probably Archæan; (6.) grey flaggy micaceous gneiss, with occasional bands of garnetiferous mica-schist, hornblende-schist, and actinolite-schist. Of these various subdivisions, the last seems to cover wide areas in the counties of Ross and Sutherland. The foregoing order of succession is also traceable in Sangomore Bay and at Farrid Head in the Durness area, though the relations of the beds have been disturbed by normal faults. The inference is obvious, therefore, that this schistose series has been pushed westwards for a distance of 10 miles along the surface of the upper thrust-plane. This conclusion is so startling at first that one almost refuses to believe the evidence, but similar extraordinary displacements of the strata have recently been demonstrated by Heim in the Alps. A careful examination of the strata overlying this upper thrust-plane reveals certain peculiar features due to these mechanical movements. The original north-west strike of the Archæan gneiss has been almost wholly obliterated, and new planes of schistosity have been superinduced parallel with that of the thrust-plane. The quartz and felspar of the pegmatites have been elongated in a north-north-east and south-south-west direction, so that the rock, in its most highly altered form, presents a marked fluxion structure indistinguishable from that of certain lavas. Gneiss has been converted into schist, and even the quartzites merge into quartz-schists. The surfaces of the striped schist, quartz-schist, and flaggy gneiss alike possess a peculiar lineation like slikensides trending in one common direction, namely east-south-east to west-north-west. Additional evidence might be adduced of the effects of these terrestrial displacements, but it will be sufficient for our present purpose to refer to another striking instance described by Dr Archibald Geikie (*Nature*, Nov. 13, 1884, p. 31). On the east side of the thrust-plane in Ross-shire, between Auchnashellach and Loch Alsh, the Cambrian sandstones rest on different zones of the Silurian rocks, and present the same streaked appearance as the Sutherland schists, due to the elongation of the quartz and felspar. Passing upwards from the thrust-plane they gradually assume a more schistose character, accompanied by the development of mica on the planes of foliation, till, in fact, it is well nigh impossible to distinguish them from the Sutherland schists. Now it ought to be clearly borne in mind that the Cambrian sandstones, lying to the *west* of the Silurian rocks in Applecross, possess none of those schistose features. They are ordinary grits and sandstones, but where they have been subjected to mechanical movement, on the *east* side, the characters are wholly different.

From these observations it is apparent that, in the north-west of Scotland, the Archæan rocks, Cambrian sandstones, and Silurian quartzites have undergone an extraordinary amount of mechanical movement, resulting in the formation of new planes of schistosity which are usually parallel with the planes of thrust. There has been a rearrangement of the constituents accompanied by the development of new minerals, and as we pass eastwards from the great thrust-planes this recrystallisation becomes so marked that it is difficult to tell, from examination in the field, what the origin of the rocks may have been. All these new structures are more recent than the Lower Silurian rocks of Sutherland, because the latter have shared in them, and they are older than Old Red Sandstone time, since the basal conglomerates of this age contain pebbles of the Sutherland schists. The conclusion is therefore forced upon us that it is quite erroneous to maintain that the eastern schists of Sutherlandshire and Ross-shire are merely altered Silurian sediments, and it is equally incorrect to say that they are

wholly Archæan. So far as the evidence yet goes it is clear, *that they consist of Archæan, Cambrian, and Silurian rocks which assumed their present structures after early Silurian times.* It is a question to be decided by future investigation how far the metamorphic rocks of the central and eastern Highlands have been affected by these movements. Comparatively little is known of the geological structure and lithological characters of the strata in these wide areas, and it is not possible to pronounce a definite opinion regarding their age. This much is certain, however, that along the Highland border, from Stonehaven to the Firth of Clyde, the rocks, consisting of greywackes, grits, slates, and black shales, are hardly, if at all, more altered than the Silurian rocks of the south of Scotland. No fossils have as yet been found in these rocks, but from the researches of the Geological Survey it appears that they graduate upwards into the limestone series of Perthshire and the mica-schists of Ben Lawers (see Geology of Perthshire, *Ord. Gaz.*, vol. iii., p. 193). Again, in the far north-east of Banffshire and Aberdeenshire, similar unaltered slates, grits, and conglomerates are met with, and at various localities the slates pass into knotted schists, and these again into andalusite-schists. These facts seem to point to the development of schistose structures in sedimentary rocks by mechanical movements—a view which is confirmed by the occurrence of foliation in some of the igneous rocks to be referred to presently.

Various references have been made to the chief mineralogical localities among these crystalline rocks in the articles on the geology of the northern counties (see *Ord. Gaz.*, vols. iv., v., vi.). It is therefore unnecessary to call further attention to them beyond the statement that the prolonged researches of Dr Heddle clearly show that the localities where crystalline limestones, hydro-mica schists, serpentines, and diorites occur are usually the best for yielding minerals. Among these localities, Portsoy, Glen Urquhart, and Grantown are justly celebrated.

The crystalline schists of the Highlands are pierced by two distinct types of igneous rocks, namely, an acidic series and a basic series. Of these, the former, consisting mainly of granite, covers extensive areas chiefly along the line of the Grampians from Aberdeenshire to Argyllshire, while a few isolated masses are to be found in Sutherlandshire. It is possible that all these granite masses may not be of the same age. There can be no doubt, however, that some of them must be older than the Old Red Sandstone, because the basal conglomerates of the latter formation, at certain localities, are mainly composed of granite pebbles and granitic detritus. Indeed, in the counties of Inverness and Nairn, where a mass of granite occurs close to the unconformable junction at the base of the Old Red Sandstone, this feature is well marked. Further, in Sutherlandshire, conglomerates of Old Red Sandstone age actually *rest on the granite mass* of Ben Stomino. On the other hand it is not improbable that some of the granitic rocks may have been erupted during the period of volcanic activity in Lower Old Red Sandstone times. The suggestion thrown out by Professor Judd that the granite mass of Ben Nevis, capped with dark grey and pink felsite, is connected with this era of volcanicity may prove to be correct. It is not far distant from the lavas of Lorne belonging to this period. The basic intrusive rocks of the Highlands are no less interesting than the granite masses. They are prominently developed in the counties of Banff, Aberdeen, and Perth, and various isolated though smaller areas occur further to the north-west. Consisting mainly of diorite and hornblende-rock, they at the same time present a wonderful variety of lithological characters, including examples of mica-diorite, kersantite, augite-diorite, gabbro, olivine-gabbro, and picrite. Indeed, the assemblage of minerals in this series of rocks is of special interest when viewed in connection with the basic intrusive rocks of later Palæozoic age. One of their characteristic features in some areas is the presence of large though impure garnets. An examination of the diorite masses, in the course of the Geological Survey of Banffshire and Aberdeenshire, clearly proved that the coarsely crystalline rocks merge into hornblende schists; the lines of foliation being parallel with the foliation of the mica-schists and the strike of the slates and grits. That the gabbros and diorites are intrusive is evident from the fact, that they pass transgressively across the edges of the slates and schists and send veins into the latter. But even these massive intrusive rocks have been subjected to such intense compression that schistose planes have been superinduced in them, running generally in a north-east and south-west direction.

Silurian Rocks of the South of Scotland.—Throughout the Southern Uplands there is an immense development of strata belonging to this formation. Arranged in a series of parallel folds, the axes of which run in a north-east and south-west direction, the same zones are repeated again and again, and are made to cover wide areas. This Silurian tableland is about 40 miles wide between the northern border and the shores of the Solway, and it stretches from sea to sea. Bounded on the north by a great fault or fracture in the earth's crust, it is covered along the east and south-east margins by Old Red Sandstone, Carboniferous, and Permian strata. Over this large tract of country there is a striking uniformity in the character of the beds, and a remarkable absence of fossils, save on a few horizons. The greater part of the area is occupied by Lower Silurian rocks; the members of the upper division being confined to a narrow belt along the southern margin of the tableland, and to certain limited areas in the Pentland Hills and in Lanarkshire. In south Ayrshire there are representatives of the Llandovery rocks evidently occupying an intermediate position between the lower and upper divisions. According to the recent researches of the Geological Survey, the Lower Silurian rocks are divisible into the following groups, in descending order:

Caradoc-Llandovery,		Fossiliferous conglomerates, grits, greywackes, and shales (Lead Hills).
Llandeilo-Caradoc,	Carsphairn Group,	Coarse grits and conglomerates with shaly partings.
	Upper Black Shale Group,	Black shales with graptolites and chert bands.
	Lowther Group,	Grey and blue shales and greywackes, with fossiliferous limestones (Wrae and Glencotho) and calcareous conglomerates (Winkstone).
	Dalveen Group,	Greywackes and shales with a prominent band of fine conglomerate, the latter occasionally yielding fossils.
	Queensberry Group,	Massive grits and greywackes, occasionally conglomeratic, with a zone of fossiliferous shales at the base (Grieston shales).
	Moffat Black Shale Group,	Black shales crowded with graptolites, shaly mudstones, and greywackes.
	Ardwell Group,	Brown greywackes, flags, and shales.

Of the foregoing subdivisions, perhaps the most interesting are the zones of black shales which are wonderfully persistent in their characters, having been traced at intervals across the country. They are typically developed in the Moffat area, where, through the exhaustive researches of Professor Lapworth, they have been grouped in the following divisions, according to the graptolite fauna :

Birkhill Division,	Upper,	Grey shales with dark seams yielding *Rastrites maximus*, *Monograptus turriculatus*, *M. Becki*, etc. Black and grey shales, with clays and mudstones, containing *Monograptus spinigerus*, *M. tenuis*, *M. Clingani*, *Diplograptus cometa*, etc.
	Lower,	Black shales with lines of clays with *Monograptus gregarius*, *M. lobiferus*, etc. Hard black flags and shivery shales yielding *Diplograptus vesiculosus*, *D. acuminatus*, etc.
Hartfell Division,	Upper,	Soft green shales with seams of black and white mudstones (*Dicellograptus anceps*, *Climacograptus bicornis*, *Diplograptus truncatus*). Barren mudstones with no fossils.
	Lower,	Hard black shales with seams of white mudstone, *Pleurograptus linearis*, *Amphigraptus divergens*, etc. Hard black flags and slaty shales, *Dicranograptus Clingani*, *Siphonotreta micula*, *Dicellograptus moffatensis*, etc. Flaky shales and mudstones, *Climacograptus Wilsoni*, *C. bicornis*, etc.
Glenkiln, Division,	Upper,	Pyritous slaty black shales and shivery mudstones, *Didymograptus superstes*, *Caenograptus gracilis*, *Diplograptus dentatus*, *Thamnograptus typus*.
	Lower,	Ribbed mudstones and flags.

The black shale series, in the Moffat area, occurs along anticlinal folds in the overlying Queensberry grits, the tops of the arches having been removed by denudation. It is somewhat remarkable that, though the foregoing subdivisions can be clearly established in that region, some of the zones gradually disappear when followed towards the north-west or the south-east. In the Hartfell anticline, for example, the highest zone of the Birkhill division has disappeared, and when traced still further towards the north-west, the representatives of this division have thinned away to a few feet of strata, containing the *Diplograptus vesiculosus* and *Monograptus gregarius* bands. Again, when the observer crosses the arches and troughs in a south-east direction, he finds a gradual increase in the sedimentary strata associated with the black shales, till, near Ettrick Pen, the Glenkiln and Hartfell divisions have vanished altogether, and only the uppermost zones of the Birkhill division are represented. No less remarkable is the variation in the distribution of the graptolites, where the Moffat zones are traced far to the south-west into Galloway. In the latter region there appears to be a curious association of species in one and the same zone, which, in the Moffat area, are confined to the Glenkiln and Hartfell divisions. These facts evidently point to considerable variations in the distribution of the graptolites on the sea-floor, and the conclusion seems obvious that it will be impossible to establish the triple classification of the Moffat black shales wherever they reach the surface in the south of Scotland. Again, in the Upper Black Shale Group, so typically developed in the Lead Hills, which is separated from the Moffat series by several thousand feet of greywackes, grits, and shales, there is a great abundance of double graptolites peculiar to the lower divisions in the Moffat area, and a remarkable absence of simple graptolites. This interesting fact evidently points to the conclusion that, towards the close of the deposition of the Moffat black shales, most of the graptolites migrated to more congenial habitats, and, after a long interval, only the double graptolites returned in profusion, when the black carbonaceous mud of the upper group was being laid down on the sea-floor.

The great succession of shales, greywackes, grits, and conglomerates forming the Queensberry, Dalveen, and Lowther Groups, are singularly barren of fossils. In Dumfriesshire, two trilobites have been obtained from the shales at the base of the Queensberry grits, while at Grieston, Peeblesshire, some graptolites and the crustacean *Peltocaris apticoides* have been found in shales occupying the same horizon. Higher up in the order of succession, a band of fine conglomerate in the Dalveen Group has yielded casts of encrinites and corals, such as *Petraia*. By far the most important fossiliferous zone, however, occurs in the heart of the mass of shales in Peeblesshire on the horizon of the Lowther Group. This zone consists of lenticular bands and nodules of limestone, occurring at Wrae and Glencotho, and has been well known to geologists ever since the discovery of fossils in the Wrae quarry, by Sir James Hall, in 1792. A considerable number of fossils has been obtained from this limestone, comprising Brachiopods, Cephalopods, and Trilobites (see Geology of Peeblesshire, *Ord. Gaz.*, vol. v., p. 168), which undoubtedly present a Caradoc facies. It was formerly supposed that the limestone rested unconformably on the shales with which it is associated, and that the latter were of Upper Llandeilo age ; but from the recent researches of the Geological Survey, it appears that the limestone and the shales are parts of one conformable series. It follows, therefore, that this shaly series, as well as the underlying groups, are of Llandeilo-Caradoc age—a correlation which has an important bearing on the classification of the Silurian rocks in the south of Scotland.

Lying in a trough of the Llandeilo-Caradoc rocks of the Lead Hills, there is an important group of strata, consisting of sandstones, greywackes, pebbly grits, and conglomerates, which yielded a considerable assemblage of fossils to the officers of the Geological Survey. The area occupied by these beds extends from Wedder Dod, 4 miles north-east of Sanquhar, to the hills on the right bank of the Clyde below Abington. It is doubtful whether this fossiliferous series rests unconformably on the Llandeilo-Caradoc rocks. There are some indications pointing to this conclusion, such as the gradual overlapping of the former on the north-west side of the trough. Be this as it may, this much is certain, that the fossils found in the conglomerates indicate a curious association of forms, which in typical Silurian regions are confined to different divisions of the system. This palæontological

feature is observable in other Silurian areas in the south of Scotland, and forms one of the chief difficulties in correlating the strata with their equivalents elsewhere. Of the 41 species determined by Mr R. Etheridge, F.R.S., 23 are referable to the Caradoc formation, 19 to the Lower Llandovery, and 18 to the Upper Llandovery. There is apparently only a slight preponderance of typical Caradoc forms in these rocks, and it might be more correct to regard them as of Caradoc-Llandovery age. The following fossils were obtained from these beds (see *Explanations to Geological Survey 1-inch Maps*, 15, 9): *Favosites fibrosa, F. aspera, Petraia bina, P. elongata, Glyptocrinus basalis, Trinucleus fimbriatus, Phacops caudatus, Leptæna sericea, L. transversalis, Orthis calligramma, O. Bouchardii, Strophomena corrugata, S. pecten, Atrypa hemisphærica, Rhynchonella, Pentamerus oblongus, Ctenodonta, Raphistoma lenticularis, Euomphalus, Murchisonia, Bellerophon acutus, Orthoceras.*

In the neighbourhood of Girvan there is an extensive area of Silurian rocks, differing in one important particular from those of the Southern Uplands, namely, in the profusion of fossils throughout several zones. Many of the forms are new to science; and when we consider the great variety of organic remains obtained from that area, comprising Graptolites, Corals, Trilobites, Brachiopods, and Cephalopods, there is little wonder that the strata have received a large amount of attention. Large collections of fossils have been made, which have been described by Salter, M'Coy, Davidson, Etheridge, sen., Nicolson, Etheridge, jun., and other palæontologists; while the relations of the rocks have been studied by Murchison, Sedgwick, Nicol, A. Geikie, Carrick Moore, Lapworth, and others. Notwithstanding such detailed investigations, the strata of the Girvan area still present several puzzling features, owing to the difficulty of harmonising the apparent stratigraphical order with the palæontological evidence. The rocks have been subjected to considerable folding and faulting, and they have also undergone much local metamorphism. These causes have, in a great measure, prevented geologists from arriving at a satisfactory solution of the order of succession of the beds. The area occupied by these strata extends along the coast for several miles south from Girvan, as far as Pinbain Hill, while it runs inland to the valley of the Stinchar. There is also an isolated tract on the north side of the Girvan valley, in the midst of Old Red Sandstone and Carboniferous strata, extending from Craighead north-east to Newlands, a distance of about 6 miles. It is obvious that it would be unsuitable to discuss here the various interpretations of this complicated region. Suffice it to say that, according to Murchison, the strata form three great flexures in the course of a few miles, and on each of the anticlinal folds Lower Silurian Limestones are brought to the surface, the axes of the folds coinciding with the Stinchar, Assel, and Girvan valleys. The schists and limestones are overlain in one of the troughs by coarse conglomerates, and in another by shelly sandstones of Caradoc age; while certain sandy and calcareous flagstones are regarded as the equivalents of the Llandovery rocks. The limestone series is well seen on the north side of the Stinchar valley, and also at Craighead about 3 miles north of Girvan, where it has yielded the following forms: *Lyopora favosa, Favosites Girvanensis, Heliolites Grayi, Streptelasma Craigense, S. aggregatum, Calymene Blumenbachii, Cheirurus gelasinosus, Ilænus Bowmani, Lichas Hibernicus, Leptæna sericea, Orthis biforata, O. calligramma, Orthoceras politum, Diplograptus foliaceus*, etc. The geological structure of the small tract of Silurian rocks north of Girvan is comparatively simple. The strata form a dome-shaped arch, truncated on the south-east side by a powerful fault throwing down the Carboniferous strata of the Girvan valley; while on the north they are unconformably overlain by the Lower Old Red Sandstone. Occupying the centre of the arch, we find a zone of comparatively barren flagstones, mudstones, and shales, succeeded by a remarkable band of mudstones (Drummuck), yielding *Calymene Blumenbachii, Trinucleus seticornis, Ampyx rostratus, Cheirurus binucronatus, Ilænus Bowmani, Bellerophon acutus*, etc. From these mudstones no fewer than sixteen species of trilobites have been obtained, which, according to Messrs Nicolson and Etheridge, chiefly occur in the Caradoc and Llandovery rocks. Next in order comes a well-marked band of conglomerate of variable thickness, separating the underlying Caradoc strata from an overlying series of Llandovery age. The latter consist of shelly sandstones, grits, and flagstones (Mulloch Hill), graduating upwards into grits and shales, containing, among other forms, *Petraia elongata, Nidulites favus, Hemithyris hemisphærica, Orthis calligramma, Murchisonia cancellata.*

Along the southern margin of the Silurian area of the Southern Uplands, a belt of Upper Silurian rocks is traceable from the Cheviots to Kirkcudbright and Burrow Head. As yet no marked unconformability has been detected between them and the Llandeilo-Caradoc rocks on which they rest. There are some bands of coarse grit at the base of the upper division throughout a considerable part of the area, but none of the sections, even where the grits intervene, proves a decided break in the order of succession. Though there is a general inclination of the strata to the south-east, they are much folded along the line of junction, and there is also a remarkable uniformity in the dip and strike of the beds on both sides of the boundary. Consisting in the lower part of the series of brown crusted greywackes, grits, flags, and shales that present certain features not unlike the Llandeilo-Caradoc rocks on which they rest, there are some characteristics, however, by means of which they can be distinguished. In the upper division the greywackes and shales do not alternate so rapidly, and it is a common occurrence to find broad zones of shale without any greywacke bands, while the pebbly grits are more massive with hardly any intercalations of shale. But the most conspicuous feature is the presence of dark, fissile shales charged with such graptolites as *Monograptus Flemingii, M. Sedgwickii, M. colonus, Cyrtograptus Murchisoniæ, Rctiolites Geinitzianus.* Sometimes they occur in thin leaves associated with the grey shales and flags, sometimes in prominent bands 20 to 30 yards broad. Lithologically, there is a clear distinction between them and the well-known black shales of the Moffat series already described. Along with the graptolites, fragments of crustaceans and orthoceratites are found in considerable abundance in the dark shales, comprising the following species, *Orthoceras imbricatum, O. tenuicinctum, O. annulatum.* Yet another distinguishing feature is the occurrence of zones of pebbly grit or conglomerate conspicuously developed on the headlands near Balmae, Kirkcudbrightshire, where they are associated with fissile, olive-coloured shales and mudstones, with limestone nodules. Both the grits and limestones are highly fossiliferous (see *Ord. Gaz.*, vol. iv., p. 422), and it is evident from the nature of the organic remains that the strata belong to the horizon of the Wenlock shales; indeed they resemble lithologically the mudstones of this age in Shropshire, while the lower and more sandy portion of the series is not unlike the Coniston flags and grits of Westmoreland. A small inlier of these rocks occurs on the north side of the Southern Uplands near Straiton, in Ayrshire.

Though it is probable that, in the south of Scotland, most of the Upper Silurian strata belong to the Wenlock formation, we have, elsewhere, a splendid development of the Ludlow rocks passing conformably upwards into the Lower Old Red Sandstone. These representatives of the highest division of the Silurian system in Scotland form isolated patches in the heart of the Old Red Sandstone, and occur at a distance of several miles from the northern margin of the Silurian area in the counties of Edinburgh, Peebles, and Lanark. In the two former counties the Upper Silurian rocks occupy several small tracts confined to the Pentland Hills, where they reach a thickness of 4000 feet, while in Lanarkshire they are brought to the surface by two arches in the Old Red Sandstone. In the latter county the anticlinal folds occupy two parallel strips of ground not far removed from each

other, and in each case the strata graduate on the north side into the Lower Old Red Sandstone, while along the southern margin they are abruptly truncated by a reversed fault bringing them in contact with different members of the latter formation (see *Ord. Gaz.*, vol. iv., p. 459; vol. v., p. 168). Unfortunately, owing to these reversed faults, there is no evidence bearing on the relations of the Upper Silurian rocks to the lower division of the Silurian system, but from the fact that the members of the upper division are inclined at gentle angles to the north-west, while the older strata of the Silurian tableland not far to the south are much folded, it is highly probable that originally they were separated by a marked unconformability. The distance between the anticlinal fold of Upper Silurian strata on the Hagshaw Hills in Lanarkshire and the northern border of the Silurian tableland is about 5 miles, but on the south slope of Tinto the upper and lower divisions occur within 2 miles of each other. At the latter locality the lowest beds of the Lower Old Red Sandstone are exposed with a general inclination to the north-west, and were it not for the overlap of certain volcanic rocks the same conformable passage would be found between the Old Red Sandstone and Silurian strata. The total thickness of the Lanarkshire series is about 3500 feet, but it is highly probable that the lowest members, both in Lanarkshire and Midlothian, represent part of the Wenlock in addition to the Ludlow rocks. A large suite of fossils has been obtained from the Lesmahagow area and from the anticlinal fold in the Hagshaw Hills, comprising *Ceratiocaris papilio*, *Dictyocaris Slimoni*, *Pterygotus bilobus*, *Lingula minima*, *Strophomena rhomboidalis*, *Modiolopsis complanata*, *Orthonota impressa*, *Platyschisma* (*Trochus*) *helicites*, *Orthoceras gracile*. Among the organic remains from these beds the most remarkable are the large Eurypterids first discovered by the late Dr Slimon of Lesmahagow, which have generally been regarded as crustaceans, but recent research has shown that it would be more correct to refer them to the Arachnida. A true scorpion was also disinterred from these beds in 1883 by Dr Hunter of Carluke.

The Silurian rocks of the south of Scotland are pierced by several large masses of granite and quartz-felsite, chiefly in Galloway, where they form oval-shaped bosses in the midst of both divisions of the system. In many cases the strike of the sedimentary beds has not been affected by the intrusion of these coarsely crystalline masses, while in others, a very marked deflection is observable. They are surrounded by a belt of altered strata, varying in extent in proportion to the size of the granite mass. It is probable that the dykes and veins of quartz-felsite, so abundantly developed in the Southern Uplands, are associated with the granitic intrusions, or at least are mainly of the same age. From the relations which the granite masses bear to the Silurian and Old Red Sandstone strata, it is possible to fix approximately the date of their eruption. On the one hand, they must be more recent than the Upper Silurian rocks in the south of Scotland, since they pierce the latter in Galloway; while, on the other hand, they are probably older than the Upper Old Red Sandstone, since granite and felsite pebbles derived from these masses are met with in the conglomerates of the latter formation and in the Cement-stone series. At the same time, it should be remembered, that some of the bosses and veins of quartz-felsite undoubtedly belong to the epoch of volcanic activity which followed the deposition of the Upper Old Red Sandstone, in the counties of Berwick, Roxburgh, and Dumfries, to be referred to presently. Again, in south Ayrshire, in the neighbourhood of Ballantrae, there are various masses of crystalline rocks, consisting of diorite, amygdaloidal porphyrite, felsite, serpentine, and agglomerates, which have generally been regarded by geologists as exhibiting certain arrested stages of metamorphic action. Beginning with unaltered sedimentary deposits, there appears to be a gradual passage from them into truly crystalline rocks of various types, but it is highly probable that the latter may, in part, represent contemporaneous volcanic rocks that have undergone much alteration, and may be of the same age as some of the Lower Silurian lavas and ashes of the Lake district. This conclusion is strengthened by the occurrence of a zone of volcanic tuff in the midst of the Moffat Black Shale series in Galloway.

Having now briefly indicated the general characters and the nature of the organic remains of the Silurian rocks in the North-West Highlands and the Southern Uplands, we may allude to the remarkable geographical changes that characterised the close of the Silurian period. From the foregoing data, it is evident that we have in Scotland a great succession of marine deposits, which accumulated in the Silurian sea, probably of no great depth. At that remote time the land seems to have lain chiefly in the north-west of the European area, as suggested by Godwin Austen, a fragment of which is still preserved to us in the far north-west of the counties of Sutherland and Ross. Whether there may have been an extensive range of Archæan land in the tract now occupied by the central Highlands, we do not at present presume to say. This at least is certain, that the ancient Atlantis, wherever it lay, must have undergone enormous denudation, judging from the vast thickness of the Silurian sediments. During their accumulation there must have been a gradual subsidence of the oceanic basin, save towards the close of Lower Silurian time. The unconformability between the upper and lower divisions of the system points to the elevation of the sea-floor, and to the consolidation, folding, and denudation of the strata of Lower Silurian age in the south part of the kingdom. After a lapse of time, subsidence again ensued, which continued till towards the close of the period when the Silurian sea-floor was elevated, in part, so as to enclose a series of inland basins. In these vast inland lakes an interesting series of deposits, now forming the Old Red Sandstone, were accumulated, which are easily distinguished from the older Silurian strata and from the younger deposits of the Carboniferous formation with their abundant marine fauna. In Scotland they attain an enormous development.

The Old Red Sandstone.—The valuable researches of Dr A. Geikie enable us in some measure to grasp the leading features of the physical geography of the country at the beginning of the Old Red Sandstone period. To the ancient basins, in which the sediments of this formation were laid down, he has assigned specific names, indicating the geographical areas which they occupied: 1. Lake Orcadie, embracing all the Old Red Sandstone to the north of the Grampian range: 2. Lake Caledonia, representing the great midland valley, from the slopes of the Highlands to the Southern Uplands: 3. Lake Cheviot, covering a portion of the south-east of Scotland and the north of England, from St Abbs Head, along the base of the Silurian Hills, to the head of Liddesdale, and including the Cheviots: 4. Lake of Lorne, occupying a district in the north of Argyllshire from the south-east of Mull to Loch Awe. The two great tablelands of the country—the Highlands and the Southern Uplands—at that time, formed prominent land barriers separating vast inland sheets of water. From an examination of the relations between the Lower Old Red Sandstone and those ancient tablelands, it is evident that the latter must have undergone considerable erosion before the beginning of the Old Red Sandstone period. On both sides of the Grampians there are numerous examples of ancient hollows now filled with deposits belonging to the lower division of this formation. But notwithstanding these important geographical changes, it ought to be borne in mind that, in certain areas of the midland basin, sedimentation must have advanced continuously from Upper Silurian to Lower Old Red Sandstone time, as is proved by the gradual passage from the one formation to the other.

In Scotland the representatives of this formation may be grouped in two divisions, a lower and an upper, which are separated from each other by a marked unconformability, indicating a vast lapse of time and important physical changes. A prominent feature in both divisions is the occurrence of massive conglomerates, breccias,

red sandstones, and shales; the whole series presenting very different lithological characters from the Silurian and Carboniferous rocks. The contrast becomes still more marked, when we consider the nature of the organic remains. Instead of a profusion of marine forms, we find abundant remains of land plants, ganoid fishes whose living representatives are now found in rivers and lakes, Eurypterids, bivalve Crustaceans, and Myriapods. Indeed, there can be little doubt that the evidence derived from the fossils is decidedly in favour of the view that these deposits accumulated in vast inland lakes. They are regarded as the equivalents of the Devonian rocks, which are also intercalated between the Silurian and Carboniferous formations. The latter, however, are oceanic deposits, charged with undoubted marine organisms, and are typically developed in Devonshire, from which county the formation received its name. The lower division of the Old Red Sandstone is further characterised by an extraordinary development of volcanic rocks, indicating prolonged volcanic activity in several of the great basins. These ancient lavas and ashes were so thickly piled on each other, that, notwithstanding the excessive denudation which they have undergone, they still form prominent ranges of hills.

Lower Division.—Beginning with the representatives of the lower division which were laid down in the great midland basin, we find that they form two parallel belts—the one extending from the coast of Kincardineshire and Forfarshire to the mouth of Loch Lomond and the Firth of Clyde; the other, from the Pentlands south-west by Tinto to Ayrshire. The centre of this basin is covered with Carboniferous and Permian rocks, and hence the Lower Old Red Sandstone now exposed to view can only be regarded as a portion of a still more extensive series of deposits. Yet the evidence clearly shows that it attains a vast thickness in the Central Lowlands. Disregarding minor differences, these deposits may be arranged in three groups: (1.) a lower, consisting of conglomerates, sandstones and flags, with no volcanic rocks; (2.) a middle, composed almost wholly of lavas, tuffs and agglomerates; (3.) an upper, consisting of conglomerates, sandstones, flags and red clays. In the northern belt these subdivisions reach a maximum thickness of 20,000 feet, while in Lanarkshire and Dumfriesshire the total average thickness is about 15,000 feet. Such a vast accumulation of deposits clearly points to the long continued subsidence of the midland basin, but there is, at the same time, sufficient evidence for maintaining that the downward movement was interrupted by local elevations of considerable importance. The members of the upper group are splendidly developed in the centre of a great trough or synclinal fold, extending from Stonehaven by the Braes of Doune to near Drymen—a distance of 100 miles, while the ancient lavas and ashes rise from underneath these, and form a prominent arch in the Sidlaws and the Ochils. In the latter range the volcanic series is well-nigh 6000 feet thick, which gives one a vivid impression of the activity of these ancient volcanoes, but in Forfarshire and Kincardineshire, the lavas and ashes are associated with sandstones and flags in such a way as to prove that the eruptions must have been intermittent. At that far off time there must have been a long line of submarine cones extending from Perthshire into Kincardineshire, nearly parallel with the margin of the inland lake; but it is highly probable that some of them may have ultimately raised their peaks above the surface of the lake, and may have become subaerial. Reference has already been made to the geological horizon of the two famous fish beds in Forfarshire, and a list of the fishes, the eurypterids, and the myriapods has been given (see *Ord. Gaz.*, vol. iii., p. 40). We must now proceed to state one or two important points bearing on the subsidence of the tableland of the Highlands. The representatives of the lower group, underlying the volcanic series, are exposed on the coast at Stonehaven, where they reach a thickness of 5000 feet, and at their northern limit they are abruptly truncated by a powerful fault or fracture that brings them into conjunction with the metamorphic rocks of the Highlands. This great fracture has been traced from the Kincardineshire coast-line to the Firth of Clyde, and, throughout a considerable part of its course, as first pointed out by Dr Archibald Geikie, it traverses the Old Red Sandstone, thus bringing different members of this formation against each other. On the north side of the fault between Crieff and Cortachy there is a considerable development of coarse trappean conglomerates with thin beds of lava, occupying the horizon of the volcanic series (Group 2), and resting unconformably on the metamorphic rocks, while the underlying beds (Group 1) are absent. It is apparent, therefore, from this overlapping of the strata, that there must have been a gradual depression of the Highland barrier, and that as the waters of the lake crept northwards the metamorphic rocks of the Highlands were buried under the accumulating sediments of the higher groups. This conclusion receives further support from the fact, that the Uam Var conglomerates forming the highest member of the Lower Old Red Sandstone in Perthshire contain pebbles of various metamorphic rocks derived from areas lying far to the north of the great line of fracture. It is probable, therefore, that only the loftiest heights of that ancient tableland projected above the water towards the close of the Lower Old Red Sandstone period.

The foregoing subdivisions are no less conspicuously developed in the belt that borders the northern margin of the Southern Uplands. In this case also the Old Red Sandstone is bounded by a great fracture extending from Midlothian to Ayrshire, which allowed this formation to slip downwards on the north side against the Silurian rocks. As already indicated, the flagstones of the lowest division (Group 1) graduate downwards into the Upper Silurian beds in the Pentlands and in Lanarkshire. In the latter area their thickness is quite as great as in Kincardineshire, and in this region too they are invested with special interest from the fact that, in a thin band of shale about 5000 feet above the base of the series, the relics of an Upper Silurian fauna have been obtained. The presence of Graptolites and Orthoceratites in this shale may readily be accounted for on the supposition that Upper Silurian forms survived in the open sea even in Lower Old Red Sandstone time, and that on the partial removal of the intervening barrier they migrated into the Old Red Lake. There can be no doubt that the beds containing these Upper Silurian forms really belong to the lower division of this formation, because Dr Hunter of Carluke has recently obtained a specimen of the typical Lower Old Red Sandstone fish (*Cephalaspis*) in the sandstones of Lesmahagow, which occupy a similar geological horizon. Equally interesting are the proofs of local elevation during this period in the southern portion of the basin. In the Pentlands, the great succession of lavas and tuffs forming Group 2 rests with a violent unconformability on the members of the underlying division (Group 1), and this same discordance has been traced far to the south-west to the slopes of Tinto. But when we advance still farther to the west, to the Kennox and Duneaton Waters, the two lower groups are found to be quite conformable. Here, then, is convincing evidence that in the south-west part of the basin the subsidence was slow and continuous, while in the south-east the downward movement was interrupted by a local elevation during which the members of the lower group were upheaved, folded, and denuded. After a time, they were again submerged and buried underneath volcanic accumulations and the conglomerates, sandstones, and flags of the upper group. Crossing the Silurian tableland to Lake Cheviot, we find, as already described (see Geology of Roxburghshire, *Ord. Gaz.*, vol. vi.), that the deposits consist almost wholly of a great succession of volcanic rocks resting on the denuded edges of Silurian strata. On the Cheviots they are splendidly developed, but it is observable that the volcanic series rests directly on the old tableland without the intervention of any sedimentary deposits; in short, the representatives of Group 1 found in the midland basin are absent in the Cheviots. But in the neighbourhood of Eyemouth, red sandstones and con-

glomerates of this age are associated with fine volcanic ash, from which, it is evident, that the old tableland of the Southern Uplands was gradually submerged, during this period, after the manner of the Highlands. Again, when we pass to the north of Argyllshire, there is ample evidence to show that, in Lake Lorne, volcanoes must have been active for a long course of time, because from Loch Crinan to Loch Melfort, and from the south-east of Mull to Loch Awe, there are thick piles of lava presenting the typical features so well developed in the Ochils.

In the great northern basin, comprising the Lower Old Red Sandstone of the Moray Firth, Caithness, Orkney, and Shetland, there is a considerable divergence in the character of the strata and the fish fauna, from that on the south side of the Grampians. Reference has been made in preceding volumes to the geological structure of the Old Red areas round the shores of the Northern Firths, to the famous fish-bed which has yielded so many ichthyolites and to the meagre relics of volcanic activity. In Caithness, however, this series rivals in importance the Lower Old Red Sandstone of the midland basin. At the base there are conglomerates and sandstones, graduating upwards into a remarkable development of blue and grey bituminous flagstones charged with abundant fish remains, which Sir Roderick Murchison regarded as a middle division of the Old Red formation. Recently, however, Dr Archibald Geikie has advanced cogent reasons for grouping the Caithness flagstones with the lower division of the system. He has shown that certain fossils are common to the flagstones of Caithness and Arbroath. For example, the Eurypterid (*Pterygotus*) so typical of the Upper Silurian and Lower Old Red Sandstone rocks occurs high up in the Caithness flagstones, and the genera *Acanthodes* and *Diplacanthus* are found in Caithness and Forfarshire. But in spite of these and other features in common, it must be admitted that there is a considerable difference in the organic remains of the two areas, but he contends that this divergence is not greater than 'the contrast between the ichthyic faunas of contiguous water-basins at the present time.' It is important to note also that the Caithness flagstone series graduates upwards into massive siliceous sandstones in Orkney, and when we pass northwards to Shetland, the typical flagstones of Caithness are hardly represented at all. In the latter region, there is a considerable development of volcanic rocks. From the list published by Dr Archibald Geikie (see 'Old Red Sandstone of Western Europe,' *Trans. Roy. Soc. Edinb.*, vol. xxviii., p. 452) it is evident that a large number of fishes—in all about 60 species—have been obtained from the Old Red Sandstone of the northern basin. The following genera are chiefly represented: *Acanthodes*, *Cheiracanthus*, *Diplacanthus*, *Osteolepis*, *Cheirolepis*, *Dipterus*, *Coccosteus*, *Pterichthys*. With them are associated abundant remains of land plants, the most common form being *Psilophyton*, while *Calamites*, *Sigillaria*, *Stigmaria* are less abundant.

At the close of the Lower Old Red Sandstone period important geographical changes again ensued. The downward movement gave place to upheaval throughout the various basins, and the vast series of deposits which had been slowly accumulating for ages were elevated so as to form a land surface and subjected to prolonged denudation. That this interval must have been of long duration is clearly proved by the marked unconformability between the upper and lower divisions of the system. We cannot tell to what extent the Old Silurian tableland of the Southern Uplands may have been covered by the deposits of the lower division, but this much we do know, that they must have been removed for the most part by subaerial agencies during the interval referred to, and the tableland must have been trenched by narrow valleys ere the Upper Old Red Sandstone was laid down. Even now, we can faintly trace the outlines of these old valleys in the Lammermuirs, where they are being excavated anew by the removal of the breccias of the upper division. In like manner, the Highland tableland must have been stripped to a considerable extent of the deposits of Lower Old Red age, as is proved by the fact that the red sandstones of the upper division rest directly on the metamorphic rocks in the basin of the Findhorn. Finally, we may adduce a striking example to show how the deposits of the lower division in the midland basin (Lake Caledonia) were subjected to a vast amount of erosion. Between the Ochils and the flanks of the Grampians, as already indicated, there is a great succession of sedimentary deposits nearly 10,000 feet thick, overlying the lavas and tuffs of the Ochils. Originally, the latter must have been buried by these overlying sediments. During the interval referred to, the volcanic series and the sandstones, flags, and conglomerates resting on them, were thrown into a great anticlinal arch, the vast thickness of sedimentary deposits forming the crest of the arch were removed, and the old lavas and tuffs were laid bare. Further, the volcanic plateau must have been carved into a series of hills and valleys ere the land was again submerged to receive the deposits of the ensuing period.

Upper Division.—The Upper Old Red Sandstone, as already stated, rests everywhere unconformably on older rocks, but graduates upwards into the Carboniferous formation. For this reason the strata of this formation have sometimes been regarded as merely a lower division of the Calciferous Sandstone. Their lithological characters link them, however, with the Old Red Sandstone, a correlation which receives support from the continued presence of land plants and ganoid fishes. During this period lacustrine conditions prevailed similar to those already described. The Highland tableland formed a barrier between the northern and midland basins, and the Silurian tableland of the Southern Uplands, in part at least, separated the latter from the basin along the southern border of the country. As yet the true marine fauna of the Carboniferous period was excluded from the various basins, unless we regard the red breccias and sandstones of Arran containing marine limestones as belonging to this formation. If this be so, as suggested by Dr A. Geikie, then it is clear that the characteristic corals, brachiopods, and other organisms of the Carboniferous rocks were in existence, and living in the sea outside the Upper Old Red Lakes. As soon as the intervening barriers were removed the marine forms were ready to enter the hitherto enclosed basins. There is little variety in the nature of the deposits of the upper division. In the northern basin they occur in the counties of Elgin, Nairn, Caithness, and Orkney. Perhaps the grandest development of these rocks in the country occurs in the island of Hoy, where the unconformability is admirably seen at the base of The Old Man, and where the basement platform consists of sheets of basic lava and tuffs, overlain by a great succession of red and yellow sandstones. The fossils obtained from these beds in the Moray Firth have been given in previous volumes (see Geology of Elgin and Nairn, *Ord. Gaz.*, vols. iii., v.). In the midland basin there is a considerable development of rocks of this age consisting of red sandstones, marls, cornstones, and breccias, which, as a rule, are unfossiliferous, save at a few well-known localities. Of these, Dura Den is the most celebrated, the fish remains occurring there in shoals (see Geology of Fife, vol. iii., p. 19). In the Lammermuirs and in Lauderdale, the remarkable breccias of this age have been compared to boulder clays of glacial origin, to which, indeed, they bear a marked resemblance, but these are overlapped by a group of red sandstones and marls covering extensive areas in Berwickshire and Roxburghshire. Indeed, the representatives of this series can be traced continuously from the valley of the Teviot across the watershed to Langholm and Annandale. When we consider the remarkable uniformity in the characters of the Upper Old Red strata, the presence of brecciated sandstones and ripple marks, it is evident that the deposits must have been laid down in shallow water, and it is equally apparent that the occurrence of such genera of fishes as *Holoptychius* and *Pterichthys* in the northern, midland, and southern basins, seems to indicate that the strata may be justly grouped with the Old Red Sandstone.

Carboniferous System.—The records of this formation are of great interest and importance. The succession of sandstones, shales, limestones, coals, and ironstones composing this system have long received a vast amount of attention, partly on account of their great economic value, and partly owing to the abundant flora and fauna embedded in the rocks. Scotland is singularly fortunate in possessing a rich development of the members of this formation, though owing to subsequent folding and denudation, they have been confined mainly to the Central Lowlands and the Border territory. There is the clearest evidence for maintaining that, originally, they must have covered a much wider extent of country; indeed, from the relics now found in the Southern Uplands there can be no doubt that as the period advanced the old Silurian tableland was gradually submerged and buried underneath these deposits. In this instance we have only another striking example of the story which has been so often repeated in the geological history of the country, namely, of the accumulation of thick deposits on these ancient tablelands and their removal by denudation.

Before describing the various subdivisions of the system as they are represented in Scotland, brief reference may be made to the nature of the flora and fauna which characterised the period. The origin of the various coal-seams is now well understood. Coal is simply mineralised vegetable matter which was not drifted seawards as formerly supposed, but which accumulated on an old land surface. The presence of beds of fire-clay underneath most of the seams of coal, in which occur numerous roots (*Stigmariæ*) of large trees, suggested to Sir William Logan the explanation that the fire-clay represents the soil on which the Carboniferous vegetation grew. This discovery was further confirmed by the occurrence of huge trees known as *Sigillariæ*, the stems of which were about 12 feet in circumference, standing vertically on a bed of coal, while the roots penetrated the fire-clay underlying it. Further, a careful examination of the seams of coal plainly shows that they consist of leaves, branches, stems, and roots of this ancient vegetation, and, in particular, of the spores which were shed in myriads from the trees. Again the 'roof' of the coal-seams is composed either of sandstone or limestone, indicating, in the former case, a gradual submergence of the old land surface and the deposition of sediment over the decaying vegetable matter, and in the latter, a sudden submergence so as to allow marine organisms to invade the area. The plants of the Carboniferous period belong mainly to the flowerless division of the vegetable kingdom, the conspicuous groups being Ferns, Calamites represented by the existing Horsetails (*Equisetaceæ*), and the Lepidodendroids, which are gigantic members of the Club-moss Family. Amongst the genera of ferns, the following may be mentioned: *Neuropteris*, *Sphenopteris*, *Pecopteris*, *Odontopteris*, *Cyclopteris*, *Alethopteris*, *Adiantites*. No less abundant are those peculiar striated fossils named Calamites, which grew on the sandy and muddy flats, often reaching a height of 20 feet or more, differing in this respect from their existing representatives. The Lepidodendroids, which attained their greatest development in the Carboniferous period, are mainly represented by the genus *Lepidodendron*. They formed huge trees upwards of 50 feet high, and were indeed the giants of the Carboniferous forests. The bark covering the long slender stems was marked with diamond-shaped scars, and from the ends of the branches hung innumerable cones, termed *Lepidostrobi*. Next in importance are the Sigillarioids, which were probably but modified Lycopods, so named from the seal-like impressions on the bark. The stem is traversed by vertical ridges and furrows, which serve to distinguish it readily from that of the Lepidodendroids, and the roots forming long compressed masses, with branching rootlets, are known as *Stigmariæ*. The Conifers were represented by the genera *Araucarioxylon* and *Dadoxylon*, while the fruit of the latter is supposed to be indicated by the fossil *Trigonocarpon*.

The fauna of the Carboniferous period is no less interesting and abundant. From the marine limestones a rich variety of marine organisms has been obtained, though it must be admitted, that in Scotland the mollusca are dwarfed in size compared with those from the Carboniferous Limestone of England,—a difference which will be satisfactorily accounted for, when we come to consider the physical conditions which prevailed in the two areas. Further, the strata associated with the coal-seams yield organisms, implying terrestrial, fresh or brackish water conditions. Among the *Protozoa*, both sponges and *Foraminifera* are represented; sponge spicules occasionally occur, as in the limestones at Dalry, Ayrshire; while the latter group are particularly abundant, and comprise the following genera: *Archæodiscus*, *Saccamina*, *Textularia*, *Trochammina*, *Valvulina*. Of these *Saccamina Carteri* is perhaps best developed, as several beds of limestone and limestone shales are almost wholly made up of this organism. A large number of *Corals* has been obtained, including the following genera: *Alveolites*, *Aulophyllum*, *Clisiophyllum*, *Cyathophyllum*, *Favosites*, *Lithostrotion*, *Lonsdaleia*, *Syringopora*, *Zaphrentis*. Of the *Echinodermata*, the Sea-lilies or Crinoids are the most abundant; indeed several of the limestones might fitly be designated Crinoidal from the fact that they consist mainly of the broken columns and plates of these forms. There are also several species of the sea-urchin *Archæocidaris*. Amongst the Annelids, *Spirorbis carbonarius* occurs in the limestones, *Serpulites* in the shales, and *Arenicolites* in the sandstones. The Crustaceans are numerously represented, particularly the Ostracods which include the following genera: *Bairdia*, *Beyrichia*, *Cypridina*, *Cythere*, *Kirkbya*, *Leperditia*. During this period Trilobites seem to have become extinct, though they occur in the lower divisions of the system. Phyllopods are represented by the genera *Dithyrocaris*, *Estheria*, etc.; the *Merostomata* by *Belinurus* and *Prestwichia;* the genus *Eurypterus*, formerly grouped with the latter order, being now regarded as a huge arachnid. The air-breathing crustaceans are represented by Arachnids, Myriapods, and Insects. Quite a valuable addition has recently been made to our knowledge of these Arachnids by the discovery of several species of scorpions in the Lower Carboniferous rocks in Dumfriesshire (see Geology of that county, *Ord. Gaz.*, vol. ii., p. 398). The Myriapods include the genera *Euphoberia* and *Xylobius*, while insects are represented by a cockroach and the larva of a dragon-fly recently found in the prolific zones of the Calciferous Sandstone near Langholm. The shales associated with the limestones are frequently crowded with Polyzoa, comprising the genera *Archæopora*, *Ceriopora*, *Fenestella*, *Glauconome*, *Polypora*. The Brachiopods are represented by the genera *Lingula*, *Orthis*, *Productus*, *Rhynchonella*, *Spirifera*, *Strophomena*, and *Terebratula;* the Lamellibranchs by *Avicula*, *Aviculopecten*, *Posidonomya*, *Anthracosia*, *Modiola*, *Nucula*, *Sanguinolites;* the Gasteropods by *Dentalium*, *Euomphalus*, *Murchisonia*, *Pleurotomaria;* the Cephalopods by *Goniatites*, *Nautilus*, and *Orthoceras*. The remains of fishes are comparatively numerous in the Scottish Carboniferous rocks, representing the two Orders, the Placoids and the Ganoids; the former, occurring in the limestone and limestone shales, indicate salt-water conditions, and the latter, estuarine or fresh-water conditions. The following genera may be instanced: *Cochliodus*, *Ctenacanthus*, *Petalodus*, *Pœcilodus*, *Acanthodes*, *Ctenodus*, *Megalichthys*, *Palæoniscus*. Finally we have to chronicle the occurrence of several genera of Amphibians, whose remains are found in the fresh or brackish water strata, belonging to an extinct order, namely, the Labyrinthodonts. These remains are usually met with in a fragmentary condition, but in the western portion of the mid-land basin good specimens of the skull and lower jaws have been dug out of the Carboniferous rocks, from which it would appear that even the larger forms were of no great size. The following genera are represented in Scotland: *Megalerpeton*, *Pholaderpeton*, *Anthracosaurus*, *Pteroplax*.

The detailed examination of the Carboniferous areas by the members of the Geological Survey clearly shows

that the strata occur in a series of basins much intersected by faults; the crests of the anticlinal folds being occupied by the lower subdivisions of the formation, or by strata even of older date. Perhaps the best example of this disposition of the Carboniferous strata is the great Lanarkshire basin, bounded on the north by the Campsie Fells, on the west by the Renfrewshire and Eaglesham Hills, on the south by the Old Red Sandstone of Lesmahagow and Lanark, and on the east by the Lower Carboniferous rocks of Linlithgowshire. The highest subdivisions of the system occupy the centre of the basin, while the lower members crop out round the margin in normal order, save where the regular succession has been disturbed by faults. The Midlothian and Ayrshire basins are also excellent cases in point. The following generalised section, taken from the official publications of the Geological Survey, will show in descending order the succession throughout the various basins :

Carboniferous Formation,	Coal Measures, 1500 to 2000 feet, . . .	2. Red sandstones with shales, fireclays, marls and *Spirorbis* limestone. There are no workable coals in this subdivision; but in the Sanquhar basin there are two very thin seams of coal and a band of ironstone. The strata rest unconformably on Group 1. 1. White and grey sandstones, oil shales, dark shales, fire-clays, numerous valuable coal-seams, and ironstones.
	Millstone Grit, about 600 feet, ...	Massive sandstones and coarse grits, with thick beds of fire-clay, occasional thin coals, ironstones, and thin limestones.
	Carboniferous Limestone Series, 1000 to 2000 feet, . . .	3. Upper group of three or more limestones, with thick beds of sandstone and coals, etc. 2. Middle group, containing several workable seams of coal, with clay-band and black-band ironstones, associated with sandstones and shales, but not with limestones. 1. Lower group, comprising several beds of limestone with sandstones, shales, some coals, and ironstones.
	Calciferous Sandstone Series, 2000 to 3000 feet, . . .	An extremely variable group of strata, consisting of sandstones, dark shales, oil shales, cement-stones, thin coals, and ironstones, which in certain areas are entirely wanting, being represented by a great development of contemporaneous volcanic rocks. These strata form the Cement-stone Group, and graduate downwards into the Upper Old Red Sandstone. When the latter is absent, there is a local base, consisting of red sandstones, grits, and breccias.

The close of the Upper Old Red Sandstone period was characterised by a remarkable outburst of volcanic activity, rivalling in importance the volcanic phase of the lower division of that formation. Indeed, when we consider the extensive areas over which the lavas and tuffs can be now traced, and the prominent hill ranges which they constitute, there can be little doubt that they form by far the most important development of volcanic rocks in the Carboniferous formation. In Haddingtonshire they form the Garleton Hills; in Midlothian they are to be found in the lower part of Arthur's Seat, Calton Hill, and at Craiglockhart; in Fife they are splendidly developed near Burntisland, where they extend from the horizon of the Grange Limestone to the base of the Carboniferous Limestone series. They sweep in a great semicircle from Stirling along the Campsie and Kilpatrick Hills to the Clyde at Bowling, thence by the Renfrewshire Hills and Gleniffer Braes to the high grounds near Strathavon—a distance of about 70 miles. Still farther to the west they form prominent features in Bute, the Cumbraes, and even in Arran. Crossing the Silurian tableland, we find them again constituting a belt of ground curving round the west side of the basin of Lower Carboniferous rocks in Berwickshire and Roxburghshire; and as we approach the Border territory, they reappear at the head-waters of the Slitrig, and can be followed continuously by Langholm and Burnswark to the vale of Annan. The last indication of them in that direction is to be seen at the base of Criffel on the right bank of the Nith, where they are exposed in a picturesque ravine, near the village of Kirkbean. In general, this important volcanic zone intervenes between the red sandstones and the Cement-stone Group, but in some areas it occupies a slightly higher horizon. For example, at the western limit of the Campsie Fells, the ancient lavas rest on sandstones, impure limestones, and marls, yielding plant remains and fish scales, which are admirably seen in the Ballagan Glen near Strathblane. They are grouped with the Cement-stones, and, indeed, form the lowest members of the series, so that there can be no doubt that the volcanic rocks really belong to the Lower Carboniferous period. This conclusion receives further support from the fact that where the volcanoes remained active for a long course of time, the Cement-stone Group is either entirely absent or sparingly developed. Perhaps the most remarkable instance of this phenomenon is to be found in Renfrewshire, where the great volcanic bank already referred to, separating the Lanarkshire and Ayrshire coal-fields, is composed throughout of lavas and ashes, with hardly any intercalations of sedimentary deposits. Occasionally among the beds of tuff there are calcareous bands, charged with *Productus giganteus*, clearly indicating that when the volcanoes became quiescent, marine organisms invaded the area. These intercalations are, however, quite exceptional. The base of the volcanic series is not far above the position of the red sandstone group; while at the top the lavas and tuffs graduate upwards through ashy strata into the Carboniferous Limestone series. It is evident, therefore, that the ancient volcanoes in that region must have poured forth sheets of lava and showers of ashes with little cessation, while the members of the Cement-stone Group were being laid down in other parts of the midland valley. An interesting feature connected with this important development of volcanic rocks is the number of orifices still to be found, representing the sites from which the materials were discharged. A glance at the published maps of the Geological Survey will show the disposition of these volcanic cones, and their relations to the erupted materials. They are usually arranged in a linear manner, and are now filled with various crystalline rocks, such as basalt, porphyrite, felstone, or with volcanic agglomerates.

There is perhaps no more variable group of strata in the Carboniferous formation of Scotland than the Cement-stone series. Not only does the character of the strata change in different areas, but there is also a great difference in the relative thickness of the beds. But from the researches of the Geological Survey it would appear that, if

we exclude minor changes, there are two well-marked types: the one, specially developed in the basin of the Clyde and in Ayrshire; the other, in the Forth basin. The strata of the former series are singularly unfossiliferous, and consist of grey, blue, and red shales and clays, white or yellow sandstones with cement-stones. Fragments of plants and fish scales are occasionally met with in the flaggy sandstones, but from the absence of the Carboniferous Limestone fauna it is evident that the conditions were not favourable for the existence of marine organisms. Quite a different facies is presented by this group in the basin of the Forth, where it ranges from the middle of Linlithgowshire on the west, through Mid and East Lothian to the north of Berwickshire, and it also prevails throughout Fife. The prominent members in these areas are massive, white and yellow sandstones, dark blue and black shales, oil shales, thin bands and nodules of clay ironstone, limestones, and occasionally an important seam of coal. Fossils occur plentifully throughout the series, and throw considerable light on the physical conditions which prevailed during the deposition of the strata. Land plants, comprising Ferns, Calamites, and Lepidodendroids, are extremely abundant in some of the beds, and there is also a profusion of Ostracod crustaceans along with the scales and teeth of various ganoid fishes. Such an assemblage of forms evidently points to the prevalence of estuarine or fresh water conditions, but, on the other hand, there is ample evidence to show that these must have alternated with marine conditions both in Fife and the Lothians. In the neighbourhood of Edinburgh upwards of 17 well-defined species of marine forms have been obtained from the Woodhall shales, and in Fife their occurrence is still more marked. In the latter area the marine bands are characterised chiefly by the presence of *Myalina modioliformis* and *Schizodus Salteri*, but though this is the case, it is important to note that nearly all the fossils in the marine bands are also found in the Carboniferous Limestone series. The order of succession of the strata with the characteristic fossils has already been given in the articles descriptive of the Geology of Fife and the Lothians, and there is, therefore, no necessity to recapitulate these descriptions here. But there is one point of special interest relating to the presence of small barriers in the midland basin giving rise to a difference in the nature of the deposits. On the north side of the Ochils, close to the Bridge of Earn, there is a small outlier of the Cement-stone series, consisting of blue clays, sandstones, and cement-stones, yielding plant remains and *Estheria*, which belong to the type occurring in the west of Scotland. Both on lithological and palæontological grounds there is an essential difference between them and the Cement-stone series in the east of Fife. It is evident, therefore, that during the early part of the Carboniferous period the Ochils must have formed a barrier between the Tay and the Howe of Fife, which, however, was submerged during the deposition of the higher divisions of the system.

From the curious alternation of strata in the Cement-stone series of the Forth basin it is clear that there must have been a considerable variation in the physical conditions of the period. The marine limestones indicate the presence of the sea and the incursion of marine forms; the shales and the sandstones point to the silting up of the sea-floor, and the deposition of fresh or brackish water limestones in shallow lagoons; while the coal-seams show that there must have been thick growths of vegetation on the swampy grounds. The accumulation of these deposits was marked by a slow and gradual subsidence which carried downwards several long promontories of land that projected from the tableland to the south. The Pentland Hills, composed of Lower Old Red Sandstone and Silurian rocks, protruded far to the north-east, and another irregular tongue of land extended from the Silurian Uplands in the direction of the sources of the river Irvine. The submergence of these promontories is amply proved by the gradual overlapping of the strata as they are traced towards the south-west. For example, the red sandstone group (Upper Old Red Sandstone), which reaches a thickness of about 1000 feet at the south end of the Pentlands, gradually disappears about 3 miles to the south, and the Carboniferous Limestone rests directly on the Lower Old Red Sandstone. This slow subsidence was further characterised by sporadic outbursts of volcanic activity when lavas and tuffs were ejected from isolated cones and buried underneath the sediments.

When we pass to the Border territory, we find a splendid development of the Cement-stone group extending from the Cheviots, down Liddesdale, to the vale of the Nith, and along the shores of the Solway to near the mouth of the Dee. In that region the strata resemble those of the basin of the Forth in the presence of marine bands and coal-seams, indicating the same striking alternation of physical conditions. These features are perhaps even more strikingly displayed in Liddesdale than in the Lothians, as important beds of limestone charged with Carboniferous limestone forms occur at Penton, and a small though valuable group of coals is also intercalated with the series at Canonbie near Langholm. But, notwithstanding this general resemblance, we find a remarkable difference in the fish fauna and even in the plants on opposite sides of the Silurian tableland. The extraordinary number of organisms new to science obtained from the beds in Eskdale in the course of the Geological Survey (see Geology of Dumfriesshire, *Ord. Gaz.*, vol. ii.), and the fact that few of the species of ganoid fishes are common to the Carboniferous rocks of the Lothians, plainly show that the Silurian tableland must have formed a prominent barrier between the two areas. The presence of these marine limestones and the coal-seams are readily accounted for when we compare the Carboniferous Limestone series of England with the lower divisions of this formation in Scotland. From the recent researches of the Geological Survey, it appears that the Calciferous Sandstones of Scotland are the equivalents of the greater part, if not the whole, of the Carboniferous Limestone of England, while the Scottish Carboniferous Limestone represents the Yoredale series of the north of England. Now, in the centre of England where the Carboniferous Limestone is typically developed, there is nearly 4000 feet of limestone charged with corals, foraminifers, and molluscs, thus plainly showing that the calcareous deposits must have accumulated in the open sea, at some distance from the land. Indeed, such a vast thickness of solid limestone without any intercalation of sandstones or coals indicates a wonderful uniformity in physical conditions. The sea-floor must have gradually subsided, and as the subsidence advanced, the marine organisms continued to build up the calcareous deposits without being disturbed by the deposition of sediment derived from the land. On the other hand, in the north of England and in Scotland, we find that this unbroken succession of limestone disappears, and is represented by sandstones, shales, limestones, and coals. In short, it is evident that a large extent of land lay to the north, and that the sea became shallower in that direction. The presence of thick sandstones, with abundant land plants and trunks of trees derived from the ancient forests, as well as the cement-stones, points to estuarine conditions; while the limestones show that the shelving shores must have been submerged at repeated intervals so as to permit of the migration of organisms from deeper water.

There are several interesting facts tending to the conclusion that the Calciferous Sandstone series must have extended far beyond their present limits in the south of Scotland. In the belt of Upper Silurian rocks bordering the Upper Old Red Sandstone and Carboniferous formations in Dumfriesshire there are several volcanic cones from which the Lower Carboniferous lavas and tuffs were ejected. These are now filled with coarse agglomerate, in which blocks of Upper Old Red Sandstone and fragments of clays and cement-stones frequently occur. This fact may appear strange at first, when we consider that these formations are now situated to the south of these old vents, but when we reflect that during the discharge of the volcanic materials, the Silurian rocks were covered by the red sandstones and cement-stones, the difficulty at once disappears. The blocks torn from the

sides of the vents fell back into the orifices, and though the overlying formations have been removed by denudation, we are now able to tell, from the materials found in the agglomerate, the nature of the strata pierced by the volcanoes. Equally interesting and suggestive is the occurrence of blocks of cement-stone with characteristic Lower Carboniferous fossils, in the breccias of Permian age near Moffat. We shall presently call attention to the characters and probable origin of these deposits that are found along the bottoms of the Annandale valleys. It is enough for our present purpose to state that there are no Lower Carboniferous rocks *in situ* anywhere in that region at the present day. But it is manifest that these old valleys must have been filled with deposits of that age, which were removed by denudation save a few isolated blocks, before Permian times. Insignificant as these facts may appear, they are of great importance, as indicating the previous extension of the Carboniferous formation and the enormous denudation which it has undergone.

In the succeeding Carboniferous Limestone Group, there is not the same marked variation in the character of the strata as that just described. Throughout the various basins from Ayrshire to Fife and Midlothian, there is a wonderful uniformity in the order of succession as given in the foregoing table. The triple classification can be easily established, and even some of the particular zones of limestone can be traced over extensive areas. In the south of Ayrshire, though this series is poorly developed, the three subdivisions can be identified, and when traced towards the north, the limestones gradually swell out till in some instances they attain a greater thickness than in any other part of Scotland. In particular, the lowest limestone, exposed in numerous quarries near Beith and divided in places in two massive beds with intercalated shales, reaches a thickness of 100 feet, and yields the following characteristic fossils: *Lithostrotion irregulare*, *Clisiophyllum turbinatum*, *Poteriocrinus crassus*, *Athyris ambigua*, *Lingula squamiformis*, *Orthis resupinata*, *Productus giganteus*, *P. longispinus*, *P. semireticulatus*, *Spirifera bisulcata*, *Aviculopecten Sowerbii*, *Myalina crassa*, *Bellerophon apertus*, *Orthoceras giganteum*, *Holoptychius Hibberti*, etc. Above this massive limestone there are two important seams of Clayband and Blackband Ironstone, the latter being sometimes interstratified with and replaced by volcanic ash. It would appear that, during the deposition of the ironstone, volcanic cones must have been discharging showers of tuff in that region, which were eventually entombed by the later deposits of the Carboniferous Limestone. There are three workable coal-seams in the middle group, overlain by the upper limestones, some of which are of considerable thickness. In Ayrshire the upper group of limestones is followed by beds of basaltic lavas and tuffs—the last indications of volcanic activity in the Carboniferous formation in that county. Again in the great central basin stretching from the Kilpatrick Hills to Linlithgowshire, these groups are equally persistent, and are typically developed. The prominent limestones and coal-seams have already been indicated in the articles descriptive of the Geology of the midland counties, to which the reader is referred for details. It will be sufficient to refer to some of the special horizons which are well-known throughout that region. The lowest limestone is represented by the Hurlet or Main Seam, underlain by a bed of coal; the two forming capital horizons for determining the geological structure of the tract. With these are associated smaller and less important beds of limestone, with occasional coals and clayband ironstones. The middle group comprises a number of valuable seams of coal including the well-known Lesmahagow Gas Coal, chiefly in the upper part of the section, alternating with sandstones and shales, while in the lower portion there are valuable seams of clayband and blackband ironstone. The base of the upper limestone group is marked by the Index Limestone—so named because it overlies the valuable minerals of the coal-bearing group, while the highest limestone is represented by the Castlecary and Levenseat seams. No contemporaneous volcanic rocks are associated with the Carboniferous Limestone series in the western part of the midland basin, but in Linlithgowshire they are prominently developed. Beginning towards the close of the deposition of the Cement-stones, the volcanic eruptions must have continued till towards the close of the Carboniferous Limestone period, but occasionally there were quiescent intervals, when the corals, crinoids, and molluscs migrated to those volcanic banks, and built up thick seams of limestone and calcareous shales. Reference ought to be made also to the great intrusive sheets occurring so abundantly in the Carboniferous Limestone series in Fife and Stirlingshire, and occupying a tolerably constant horizon, namely, about the position of the lowest limestone zones. These great wedges of igneous material frequently give rise to prominent physical features; they form a well-marked escarpment on the crest of Benarty and the Lomonds, and the same feature is observable at Abbey Craig and Stirling Castle (see Geology of Fife, *Ord. Gaz.*, vol. iii.; also Geology of Stirlingshire, vol. vi.).

From the foregoing description, it is apparent that there must have been a remarkable uniformity in the physical conditions of the period. Where the series is typically developed, the following is the arrangement of the strata in descending order: (*a*) coal, (*b*) sandy fire-clay, (*c*) sandstone, (*d*) shale, (*e*) limestone—the latter forming the 'roof' of another bed of coal underlain by the same succession of strata. The limestones indicate a prevalence of marine conditions when the sea-floor was tenanted by corals, crinoids, and other organisms; the shales and sandstones point to the accumulation of sediment and the silting up of the sea bottom. By degrees shallow lagoons and mud flats were formed, which were overspread with that peculiar grey mud suitable for the growth of luxuriant vegetation now stored up in the valuable seams of coal. The fact that a coal-seam is usually overlain by a bed of limestone, shows that a sudden submergence must have ensued, which carried the old land surface down to such a depth as to allow the marine organisms to overspread the decaying vegetation. Of course, it is obvious that during the deposition of the middle coal-bearing group, in which no limestones occur, the land could only have been depressed to a limited extent after the accumulation of the vegetable matter; in fact, the submergence was never great enough to permit the incursion of marine organisms. In the latter case, the roof of the coal is formed of sandstone or shale. Finally, it may be observed that, as the deposition of the ironstones was associated with decaying animal and vegetable matter, which precipitated the salts of iron present in the sea-water, we may justly infer that they accumulated in pools or lagoons. It is evident, therefore, that during the Carboniferous Limestone period, the land was steadily subsiding, with long intervals of repose. There are certain facts which may now be adduced, tending to show that this irregular subsidence of the land produced violent overlaps of the strata. In the basin of the Clyde, as we advance westwards, the Calciferous Sandstones are overlapped by the Carboniferous Limestone, till the latter rests directly on the Lower Old Red Sandstone to the south of Lesmahagow. Still more remarkable is the occurrence of representatives of the Carboniferous Limestone on the crest of the Old Red Sandstone ridge to the south of Tinto, and still farther to the south-west, on the Silurian tableland in the Duneaton Water. In the former case, they rest unconformably on the Old Red Sandstone; and in the latter, they have been preserved by powerful faults, which have brought them into conjunction with the Lower Silurian strata. The significance of these facts, as bearing on the previous extension of the Carboniferous formation over the Southern Uplands, needs no demonstration.

Overlying the preceding group, we find a succession of white, yellow or red sandstones, which attain a very limited development in Scotland. Where no faults intervene, this formation can be traced as a belt of variable

width round the margin of the true Coal-measures, a feature which is conspicuously developed on the eastern border of the great Lanarkshire Coal-field. Sometimes the sandstones merge into grits and even into fine conglomerates, indicating that land must have been not far distant during their accumulation; sometimes they are associated with fire-clays of considerable economic value, thin limestones, bands of ironstone and even a few thin coal-seams. These are, however, of exceptional occurrence; the dominant member being coarse sandstone, and hence the term Millstone Grit has been applied to this division of the Carboniferous System. According to the researches of the Geological Survey it would appear to be absent in some parts of the Ayrshire basin, as the Coal-measures rest directly on the Carboniferous Limestone, even where the interbedded volcanic rocks at the top of the latter series are not present. Fossils are by no means plentiful, but the following forms have been obtained from the shales and impure limestones: *Serpulites carbonarius*, *Discina nitida*, *Orthis*, *Lingula mytiloides*, *Bellerophon decussatus*, etc. From the lithological characters of the formation it is apparent that the land must have been subsiding at intervals, and that the depth of the sea never could have been sufficient to allow many true marine organisms to enter the area. The intercalation of some thin coal-seams with the fire-clays points to the recurrence of old land surfaces during the period.

Finally, we have at the top of the Carboniferous system what is unquestionably the most valuable of all the great divisions, namely, the true Coal-measures. It is divisible into two members: the upper, consisting of red sandstones resting unconformably on the lower, composed of numerous valuable coal-seams, clay-band and black-band ironstones, bituminous shales, sandy shales, fire-clays, and sandstones. If we take the Clyde coal-field as a typical example, there are no fewer than eleven beds of coal and seven seams of ironstone of more or less value in the central portion of the basin. Though it is true that the coal-seams generally rest on a bed of fire-clay representing the old land surface on which the vegetation grew, it is observable that some of the seams have no underclay at all. In this case, the coal varies in quality, and is frequently intercalated with sandy shales or sandstones. It is probable that in such instances, the coal-seams may be due to the drifting of vegetable matter, and their formation may be an exception to that already described. From an examination of the fossils it is evident that during the deposition of the true Coal-measures, fresh or brackish water conditions must have prevailed throughout the Scottish basins. Indeed, the occurrence of Carboniferous Limestone forms is extremely rare, so rare in fact, as to show that they were almost wholly excluded from the basins of deposit. The constant repetition of coal-seams with sandstones, shales, and ironstones, shows that land conditions must have been in the ascendant, followed at intervals by slight submergence. It is not necessary to invoke movements of elevation to enable the vegetation to overspread the sandy sediment. This result might have been successfully accomplished by the gradual silting up of the old sea-bottoms or estuaries, which would convert the shallow seas into muddy flats and swamps. It will be readily perceived that the coal-seams represent an enormous amount of compressed vegetation, and when we reflect that many of the coals are composed, to a large extent, of spores shed from the lycopodiaceous trees, we may form a vivid impression of the long lapse of time represented by each coal-growth. The characteristic fossils of the Coal-measures consist of plants, crustaceans, molluscs, fishes, and labyrinthodonts. The following fossils have been obtained from different horizons in this series: *Sphenopteris*, *Neuropteris*, *Alethopteris lonchitica*, *Calamites*, *Lepidodendron*, *Lepidostrobus*, *Leperditia Scotoburdigalensis*, *Beyrichia arcuata*, *Lingula mytiloides*, *Anthracomya*, *Anthracosia acuta*, *Acanthodes Wardi*, *Coelacanthus lepturus*, *Ctenodus*, *Megalichthys Hibberti*, *Pleuracanthus gibbosus*, *Platysomus*, etc.

The marked unconformability at the base of the red sandstones, forming the upper subdivision of the Coal-measures, shows that the prolonged subsidence which had prevailed throughout the Carboniferous period at length gave place to a movement of elevation. The coal-bearing strata were elevated so as to form a land surface, and considerably denuded before the red sandstones were laid down above them. During this interval the Coal-measures must have undergone no small amount of erosion in several of the basins, and we have, therefore, no continuous sequence of deposits at the close of the Carboniferous period. Further, there is evidence to show that during this interval the coal-bearing strata were faulted to some extent before they were covered by the red sandstones. In the course of the Geological Survey of the Sanquhar Coalfield it was observed that the red sandstones actually overspread a fault in the Coal-measures with a downthrow of 90 fathoms without being themselves disturbed. But as the red sandstones contain two thin coal-seams and a band of ironstone there is no doubt as to their true geological horizon. In the Clyde basin the unconformity is very gentle. The strata of both subdivisions are inclined in the same direction, and the discordance can only be determined by observing their relations over a considerable area.

Within the Silurian tableland of the Southern Uplands, there is an important basin of Carboniferous strata resting unconformably on the Silurian rocks, and forming the Sanquhar Coalfield. The strata claim special attention on account of the interesting story which they tell regarding the excavation of valleys in that ancient tableland and the extension of the true Coal-measures. From the relations of the younger Palæozoic rocks to the older series, it is clear that long before the Coal-measures were laid down, the old tableland must have been carved into hills and valleys: in short, the valley of the Nith must have been a valley in Carboniferous time. At the south end of the basin there are some isolated patches of strata probably belonging to the Carboniferous Limestone, which in the adjoining basin of Thornhill are much more largely developed. In the latter district beds of limestone with marine organisms are associated with the sandstones and shales, but as we ascend the valley these representatives of the Carboniferous Limestone gradually disappear, till in the Sanquhar basin the Coal-measures rest directly on the Silurian rocks. These facts are highly suggestive, because when they are viewed in connection with the evidence given in the foregoing pages regarding the violent overlaps in the Carboniferous formation, they point to the conclusion that the most elevated portion of the Silurian tableland must have lain to the south-west. We have no means of ascertaining the original extension of the Coal-measures across the old tableland, but it is safe to infer that the prolonged subsidence ultimately carried down beneath the waters a considerable part, at least, of the old land barrier. Quite recently, in a series of reefs at the Innimore of Ardtornish, Morvern, Professor Judd discovered a group of coarse white sandstones and shales charged with plant remains, along with thin and imperfect seams of coal. Among the plants, the following have been identified: *Lepidodendron aculeatum*, *Calamites Suckowii*, *Sigillaria*, and *Stigmaria*. The total thickness of strata does not exceed 50 feet, and on one side they are truncated by a fault, while on the other they are overlapped by the Poikilitic beds at the base of the Secondary Series. On the strength of the palæontological evidence, he regards this patch of strata as a fragment of the Carboniferous formation which has escaped denudation, and suggests that, originally, deposits of the same age may have had a great extension throughout the Highlands.

Permian System.—At the close of the Carboniferous period, powerful subterranean movements again ensued, which were eventually accompanied with striking manifestations of volcanic activity. The various deposits which had accumulated during the prolonged subsidence in Carboniferous time, were upheaved and subjected to

considerable erosion. Indeed, in Fife there is clear evidence for maintaining that the Carboniferous strata must have been folded, faulted, and extensively denuded before some of the Permian volcanic cones began to discharge showers of ashes. Partly from the lithological characters of the strata, and partly from the nature of the organic remains, Sir Andrew Ramsay has inferred that these subterranean movements resulted in the formation of inland lakes or enclosed basins, in which the Permian rocks were laid down. In short, the physical conditions must have resembled to some extent those which characterised the Old Red Sandstone period. That his ingenious suggestion is probably correct, will be better understood after a brief description of the nature of the deposits. In Scotland this formation is not so extensively developed as in England, neither is there the same variety in the strata. At present they form isolated basins at various localities in the south of Scotland, which were in all likelihood originally connected with each other: (1.) in the centre of the Ayrshire Coalfield; (2.) at Thornhill; (3.) at Dumfries; (4.) at Loch Ryan; (5.) at Lockerbie; (6.) at Moffat; while still another important area bordering the Solway extends from the vale of Annan to the Canonbie Coalfield. Not the least interesting of the rocks in these areas are the lavas and tuffs forming the base of the formation in Ayrshire. At this locality they form the rim of the basin, the centre of which is occupied by brick-red sandstones, exposed in the picturesque ravine in the river Ayr at Ballochmyle. Similar lavas occur at the base of the series in the Thornhill basin, and patches of the same volcanic rocks near Sanquhar have been referred to this horizon. Beyond the limits of the Permian basin of Ayrshire there is an interesting series of necks, representing the roots of the Permian volcanoes. A glance at the Geological Survey 1-inch Map (sheet 14) shows how a group of them is arranged in a linear manner along the banks of the Doon to the north of Dalmellington; and other examples are scattered over the Ayrshire basin. They pierce all the subdivisions of the Carboniferous system, and even the red sandstones resting unconformably on the Coal-measures. They are now filled with coarse agglomerate, composed chiefly of blocks of diabase-porphyrite. That these undoubtedly represent the pipes of old volcanoes has been amply proved in the course of the coal-mining operations of the district, for, according to the researches of Professor James Geikie, the seams of coal have been worked close to the necks, and in the immediate neighbourhood of the latter they display that alteration produced by contact with igneous materials. Other examples of volcanic cones probably belonging to this period are to be found in Midlothian and Fife. In the former region the ancient volcano of Arthur's Seat is an admirable instance, where a vast mass of coarse agglomerate was ejected, and now rests on the denuded edges of the Lower Carboniferous lavas, tuffs, and sandstones. After the eruption of these fragmentary materials, a column of basaltic lava forced its way up the vent, now represented by the basalt of the Lion's Haunch. In Fife the remains of nearly fifty of these old volcanoes occur between Leven and St Andrews, which are admirably displayed in many natural sections. The wide area over which these orifices have been traced enables us to realise the remarkable activity of volcanic agencies at the beginning of the Permian period (see *Ord. Gaz.*, vol. ii., p. 471; vol. iii., p. 20).

The red sandstones overlying the diabase lavas in the Permian basin of Ayrshire have not yielded any organic remains, but they are distinguishable from the sandstones of the Carboniferous system by their brick-red colour. It is important to note also that these Permian rocks rest unconformably on the red sandstones forming the youngest member of the Carboniferous formation; hence there can be no doubt that they form an independent series, distinguished by peculiar lithological characters and by the absence of the Carboniferous fauna. In the other basins where the lavas and tuffs are absent, there is a peculiar brecciated conglomerate usually lying at the base of the series, and resting unconformably on the old Silurian platform, which deserves more than a mere passing allusion, because it indicates, beyond doubt, that glacial action must have had something to do with its accumulation. Many years ago, when studying the brecciated conglomerates of this age in England, Ramsay showed that they contained blocks, striated in the same manner as stones in ordinary boulder clay, and from the appearances presented by the deposits and the assemblage of stones he inferred that they were of glacial origin, resembling modern glacial drifts. Recently the breccias of Moffatdale have yielded several excellent examples of striated stones analogous to those in the adjacent boulder clay. The blocks have been derived from the Silurian hills, and consist mainly of grits, greywackes, shales, and felstones, but along with these there are fragments of the Cement-stone Group with Lower Carboniferous fossils, to which reference has already been made. The breccias in the Dumfries basin have also yielded casts of fossils, indeterminable owing to their imperfect preservation, but which have evidently been obtained from Palæozoic deposits previously removed by denudation. Overlying these basement beds we find a considerable thickness of red sandstones, largely in request for building purposes in the South of Scotland, which have yielded, near Dumfries and on Corncockle Moor, an interesting series of footprints, produced by animals moving along the sandy shores of the Permian lakes. No remains of the animals which frequented the shores of these old lakes have as yet been met with in Scotland, but in England the Labyrinthodont Amphibian, *Dasyceps Bucklandi*, has been unearthed at Kenilworth, and the true land reptiles, *Proterosaurus Speneri* and *P. Huxleyi*, have been obtained from the marl slate. In the sandstones of the vale of Eden pseudomorphous crystals of rock salt and deposits of gypsum occur, evidently indicating, as Ramsay suggested, the concentration of saline waters in inland lakes. We have no means of determining the original development of these deposits in the South of Scotland, but there can be little doubt that the old valleys must have been in great part filled with them, and that the various basins are merely isolated relics of widespread deposits. Various interesting facts tend to substantiate this conclusion. For example, the members of the Cement-stone Group along the shores of the Solway between the Dee and the Nith and also in the neighbourhood of Canonbie have been reddened by infiltration of iron oxide at the time when they lay buried under Permian strata. The same feature is observable in the Silurian strata near Dumfries, at Lockerbie, and in Eskdalemuir. But perhaps a still more remarkable proof is the occurrence of a small outlier of breccia on the Silurian tableland between the village of Crawfordjohn and Leadhills. Composed of subangular blocks of Lower Silurian rocks, embedded in a red gritty paste, with little apparent stratification, the deposit recalls the peculiar breccias of the Moffat valley, and has been grouped with this formation by the officers of the Geological Survey. Though the evidence on which this correlation is based is comparatively slight, it is probably correct, and if so, then it points to a remarkable development of the Permian deposits.

Triassic System.—The strata which now fall to be described form the base of the great succession of Secondary formations which are distinguished from the Palæozoic rocks, alike by their lithological characters and by their organic remains. The flora and fauna of the Secondary formations indicate a wide divergence from the types which flourished in such profusion in Palæozoic time. Unfortunately, in Scotland these deposits now occupy very limited areas compared with their original extension, and the geologist labours under considerable disadvantages in attempting to unravel the physical conditions that prevailed during their deposition as well as their life history. But these very obstacles have only imparted an additional charm to the study of the Secondary rocks. Restricted as they are to the north-east coast of Scotland, the western seaboard

of the Highlands, and the Inner Hebrides, they are closely linked with the geological history of the Highlands. No trace of any of the Secondary formations is now to be found in the Central Lowlands or in the Southern Uplands, not, indeed, till we reach the neighbourhood of Carlisle; but their absence in these areas does not by any means negative the supposition that they may formerly have existed there.

Lithologically the Triassic strata bear a close resemblance to the Permian, and it has therefore been conjectured by Ramsay that similar Continental conditions prevailed during this period. Indeed, from the great deposits of rock-salt associated with the Triassic sandstones of England, there are good grounds for accepting his suggestion that they were accumulated in vast inland basins. But, though it is apparent that similar physical conditions prevailed during Triassic time, there is clear evidence to show that in England the Permian strata had been upheaved and extensively denuded before the Triassic sediments were laid down above them. In Scotland, however, the Permian rocks are nowhere overlain by later formations save the Pleistocene, and we have, therefore, no indication of the terrestrial movements which then ensued. To add still further to the difficulties of the stratigraphist, the age of the so-called Triassic sandstones of Elginshire has long been a disputed question. Allusion has been made in a previous volume (*Ord. Gaz.*, vol. iii., p. 566) to the nature of this controversy, and to the series of deposits which have given rise to it. There would have been no necessity for any further reference to the subject had not additional light been thrown on it by a discovery which has been made since that article was written. The strata now referred to consist of grey and yellow sandstones, yielding a remarkable series of reptilian remains, which have been investigated by Professor Huxley, and along with these sandstones there is to be found at various localities a cherty and calcareous band, well developed at Stotfield. These reptilian remains belong to a crocodile which must have been about 18 feet long, and to two lizards, one about 10 inches and the other about 6 feet in length. The discovery of the remains of one of the lizards, namely, *Hyperodapedon*, in strata of Triassic age, in Devonshire, Warwickshire, and in Central India, led Professor Huxley to the conclusion that the reptiliferous sandstones of Elgin are of the same age—a correlation which has latterly been generally accepted. On the other hand, there are some geologists who contend that the reptiliferous strata may probably be a further development of the Upper Old Red Sandstone in the neighbourhood of Elgin. The latter yields scales and plates of the fishes characteristic of that period together with footprints but no reptilian remains. The lithological distinctions between the Upper Old Red Sandstone and the reptiliferous sandstone are not very marked, and in the absence of any evidence of an unconformability between the two, it was argued that they might probably belong to one formation. The evidence is obscured by a vast accumulation of glacial and post-glacial deposits, and hence the difficulty hitherto felt in determining the stratigraphical relations of the beds. Recently, however, an interesting discovery has been made in the course of excavations for building purposes in a sandstone quarry on the Bishopmill ridge to the south of Newspynie church. The depth of this quarry is about 60 feet. In the upper part of the section about 15 feet of sandstone occurs, resembling the ordinary reptiliferous strata of that region, and yielding bones and other remains of reptiles. These beds rest on a pebbly grit or fine conglomerate about 6 feet thick. Underneath this band lie beds of sandstone containing the remains of the typical Upper Old Red Sandstone fish (*Holoptychius nobilissimus*), but as far as the excavations have gone, no trace of the reptilian remains have been found associated with the ichthyolites. This section is of special interest, because it shows what geologists were long anxiously in search of, namely, the reptiliferous beds and the Upper Old Red Sandstone in contact with each other. From this section it is evident that the former are not brought into conjunction with the latter by means of a dislocation, as some have contended; the one series rests on the top of the other, and the junction must therefore be conformable or unconformable. If conformable, then both groups of strata must belong to the Upper Old Red Sandstone; if unconformable, then the reptiliferous sandstones are in all likelihood of Triassic age. It cannot be said that this question is satisfactorily determined by this section, owing to the jointed character of the strata. Still the presence of a band of pebbly grit or fine conglomerate at the base of the reptiliferous sandstones naturally suggests a probable unconformability between them and the underlying Upper Old Red Sandstone. This conclusion receives further support from the occurrence of Upper Old Red fish scales in flagstones far to the north, near Lossiemouth. Indeed the exposure of these flagstones suggests the idea that they may probably form a portion of the Upper Old Red Sandstone platform, protruding through a thin cake of the reptiliferous sandstones. At the base of the Secondary formations on the east coast of Sutherlandshire, between Dunrobin and Golspie, sandstones associated with a peculiar cherty calcareous rock are to be found, which are regarded by Professor Judd as the equivalents of the reptiliferous series of Moray, but this correlation has not been confirmed by the discovery of any reptilian remains in the beds at Golspie.

On the western seaboard of the Highlands various patches of conglomerates, breccias, and red sandstones are to be found, occupying a similar horizon. Of these, perhaps the most interesting is the outlier at Gruinard Bay, first detected by Macculloch, whose researches in the geology of the West Highlands at the beginning of this century have earned for him an enduring reputation. At this locality they consist of brecciated conglomerates, argillaceous sandstones, variegated clays and marls overlain by red argillaceous and sandy beds, which have been thrown down by great dislocations against the Cambrian sandstones. None of the later Secondary formations overlie these Triassic sandstones, but the representatives of this formation in Raasay, Sleat, and Ardnamurchan, appear to graduate upwards into the Lias. This conformable succession is admirably seen at Ru-na-Leac, in the island of Raasay, where the strata occur in the following ascending order: (*a.*) at the base, conglomerates with pebbles of quartzite, Cambrian sandstone and limestone associated with micaceous sandstone; (*b.*) red clays and marls merging into sandstones and conglomerates; (*c.*) mottled sandstones, calcareous in places, and containing fragments of limestone, graduating upwards into the Lias. Elsewhere, as, for example, at Inch Kenneth, Gribun, Loch Aline, and Morvern, they are covered unconformably by Upper Cretaceous strata or by contemporaneous volcanic rocks of Tertiary age. No fossils have been found in the Triassic strata of the West Highlands save some casts of bivalve shells in a quarry at Ardtornish Towers. From the lithological characters of these rocks, from the presence of peroxide of iron and veins of gypsum in the sandstones, as well as the conspicuous dearth of fossils, it is evident that, like their English equivalents, they were deposited in inland lakes, and not in the open sea.

Jurassic System.—The Jurassic rocks of Scotland occur in areas far apart from each other, on the east coast of Sutherland, in the basin of the Moray Firth, along the western seaboard of the Highlands, and in the Inner Hebrides. A careful examination of the distribution and physical relations of the members of this system, within recent years, has amply proved that they are relics of deposits once extensively developed throughout the northern part of the kingdom, and that they have been preserved from complete demolition by remarkable geological phenomena. In the north-east of Scotland the largest and most important development of this formation occupies a narrow belt of ground, about 16 miles in length, on the coast of Sutherland, from Golspie to near the Ord of

Caithness. Along their inland margin the strata are bounded by a fault or dislocation of great magnitude, which has allowed them to slip down, as it were, on the south-east side against the hard crystalline gneiss and schists with their associated igneous rocks. The very same relationship is observable in the case of the small patches of Jurassic rocks occurring at the base of the Ross-shire cliffs, to the north and south of the Sutors of Cromarty. Here they have been thrown down to the south-east against granitoid gneiss and highly inclined beds of Lower Old Red Sandstone by a powerful fault, which is probably a continuation of the dislocation traversing the Great Glen. As to the precise age of these great dislocations, we have no definite knowledge; all that we know for certain is, that they must be more recent than the Upper Oolite, inasmuch as these rocks have been affected by the movements, and have been brought into conjunction with the older strata. The direction of these two great faults, which run parallel with each other, is north-east and south-west, and it is probable, if not certain, that they belong to the same period. But it ought to be borne in mind that the fracture traversing the Great Glen is of much more ancient date, reaching back at least to Old Red Sandstone time, if not to an older period. The geological structure of the north-east portion of the Glen proves that the Lower Old Red Sandstone rocks have slipped downwards on the south-east side, the downthrow, in this instance, being in the same direction as at the base of the Ross-shire cliff on the west side of the Moray Firth. It is evident, therefore, that this ancient line of fracture must have been affected by subterranean movements at different geological periods, and that the last movement of which we have certain knowledge must have been post-Jurassic. After a moment's reflection it will be manifest that before the Jurassic rocks were affected by these dislocations, they must have extended far to the west of their present limits, but owing to the prolonged denudation of the northern Highlands at different geological periods, not a trace of these deposits is now to be found on the west side of the lines of fracture. Their preservation, therefore, on the Ross-shire and Sutherlandshire coast, is directly due to those faults, by means of which they have slipped downwards against harder rocks, and have been better able to resist the agents of denudation. No less remarkable is the method of preservation of the Jurassic and other secondary strata of the Western Highlands, where they occur at intervals, over an area measuring about 120 miles from north to south, and about 50 miles from east to west. Long after their formation they were buried under vast accumulations of sheets of lava, erupted during the Tertiary period, which now form grand terraced escarpments in Mull, Skye, and other islands. Round the edges of the volcanic plateaux, especially where the combined action of the sea and subaerial agencies have removed the overlying volcanic materials, or where the streams have cut deep trenches through the sheets of lava, the Secondary strata are exposed anew. In some cases, too, we find portions of the Secondary strata enclosed in great sheets of basalt, or it may be in the agglomerates and tuffs ejected from the volcanic orifices of the period. By the study of these isolated and fragmentary sections, it is possible to follow the geological history of our country through long cycles of time, and to correlate the deposits with the much more perfect series in England. From the time of Macculloch, whose geological map of the West Highlands is a monument of laborious research, these rocks have been studied by various investigators, including Murchison, Hay Cunningham, Edward Forbes, A. Geikie, Wright, Bryce, Tate, Judd, and others. By far the most exhaustive contributions to the literature of the subject which have recently appeared, have been made by Professor Judd, who has shown that, on the east coast of Sutherlandshire and Ross-shire, all the main subdivisions of the Jurassic system from the Lower Lias to the Upper Oolite, with the exception of the Upper Lias, are represented; while in the West Highlands and Islands the sequence can be traced only from the Lower Lias to the Oxford Clay.* In the articles descriptive of the geology of Ross-shire, Sutherlandshire, and Skye, the lithological characters of the various zones of the Jurassic system with their most characteristic fossils have been given (see *Ord. Gaz.*, vol. vi.), and we shall therefore now point out certain striking features which distinguish the Scottish Jurassic rocks from their representatives in the south of England. In the latter region the lithological characters of the strata and the organic remains alike testify to the prevalence of marine conditions during the deposition of the various zones from the Lower Lias till at least about the middle of the Upper Oolite. The Portland and Purbeck beds indicate that the marine gradually gave place to estuarine conditions, and that a great change must have taken place in the physical geography of that region. But when the Jurassic rocks are traced northwards into Yorkshire, it is observable that the Lower Oolite is represented by sandstones, shales, thin coals, and ironstones, indicating, unquestionably, that these deposits must have been laid down in estuaries, thus contrasting with the marine conditions which existed during the deposition of the other members of this system in that area.

Still more conspicuously is this feature developed in Scotland, where there is a constant alternation of estuarine and marine strata, the former frequently predominating, and presenting considerable variations at different localities. This remarkable alternation is strikingly displayed in the north-east of Scotland in the zones ranging from the Lower Lias to the Upper Oolite, as shown by Professor Judd. Prominent among the estuarine strata are to be found conglomerates, sandstones, and shales; the sandstones exhibiting ripple marks and worm tracks, and containing abundant remains of plants and drifted wood. Associated with these are finely-laminated clays and bands of limestone charged with fresh-water shells, and occasionally with dwarfed marine forms; while seams of lignite and coal, sometimes of considerable thickness, are interbedded with the sandstones and clays. On the other hand, certain zones occur with the characteristic marine forms, showing that marine conditions must have prevailed at intervals. For example, the estuarine sandstones, conglomerates, and shales at the base of the Lower Lias in Sutherland are overlain by micaceous clays and shelly limestones, with characteristic marine forms; while the Lower Oolite is composed mainly of estuarine strata, consisting of sandstones, shales, and coals. On this latter horizon the well-known coal-seams are met with, one of them actually reaching a thickness of about 4 feet. Again, in the Middle Oolite there are several important marine zones alternating with estuarine strata; of the former, the 'roofbed' of the Main Coal seam is an excellent example, consisting of sandstone passing into a limestone, charged with Ammonites and Belemnites, belonging to the horizon of the 'Kelloway Rock' in Yorkshire (see *Ord. Gaz.*, vol. vi.). Finally, the Upper Oolites are represented in Sutherland by a splendid development of sandstones, shales, grits, and brecciated conglomerates, indicating estuarine conditions, and probably the transportation seawards by ice-rafts of large masses of rock with trunks of trees. Indeed, from these observations it will be apparent that the sequence of physical conditions during Jurassic time in the Northern Highlands must have resembled to some extent those which prevailed during part of the Carboniferous period in Scotland.

When we compare the Jurassic strata of the West Highlands with their representatives on the east coast, the same recurrence of estuarine and marine conditions is observable, though in a less prominent form. At certain localities, sandstones and thin coal-seams are to be found at the base of the Lias, while between the Lower Oolite and the Oxford Clay a great estuarine series is intercalated, consisting of sandstones, shales with much

* See Quart. Jour. Geol. Soc., vol. xxix., p. 97; also vol. xxxiv., p. 660.

carbonaceous matter, and limestones made up of comminuted shells. According to Professor Judd there are nearly 3000 feet of Jurassic rocks exposed in the West Highlands from the base of the Lias to the Oxford Clay, and if to this amount we add 1000 feet for the thickness of the Upper Oolite in Sutherlandshire, then the total thickness will be not far short of 4000 feet. The reader is referred to the papers communicated to the *Quarterly Journal of the Geological Society of London* by the authors already mentioned for detailed lists of the fossils obtained from the Jurassic rocks of Scotland. It will be sufficient for our present purpose if we indicate generally the nature of the flora and fauna, and some of the fossils characteristic of the prominent zones. The plants are represented by Ferns, *Equisetites*, Cycads, and Conifers. A graphic description of the Jurassic flora of Sutherlandshire is given in the last chapter of the *Testimony of the Rocks*, by Hugh Miller, in which he shows that Scotland in Oolitic times must have had its mighty forests of pine. The plant which seems to bulk most largely in the coal-seams, as pointed out by Sir Roderick Murchison, is *Equisetites columnaris*. The fauna of the period is both rich and varied. The Corals are represented by the genus *Isastræa;* the Echinoderms comprised Sea-urchins and Crinoids, the former being represented by the genus *Cidaris*, and the latter by *Pentacrinus*. The Brachiopods are represented by the genera *Rhynchonella, Lingula, Spiriferina, Waldheimia;* the Lamellibranchs, which are particularly abundant, by *Avicula, Gryphæa, Inoceramus, Lima, Ostrea, Pecten, Plicatula, Arca, Cardinia, Cyrena, Nucula, Leda, Pholadomya, Unicardium, Trigonia, Unio;* the Gasteropods by the genera *Chemnitzia, Natica, Pleurotomaria, Tectaria, Melania, Paludina;* and the Cephalopods by *Ammonites* and *Belemnites*. The last order—namely, the Cephalopods—attained a great development, and from the classification of the Scottish Jurassic rocks adopted by Professor Judd it would appear that some of the prominent zones are characterised by the same species of Ammonites and Belemnites as their English equivalents. For example, in the West Highlands the Lower Lias is defined by the presence of *Ammonites Bucklandi, A. Conybeari, A. semicostatus;* the Middle Lias by *Ammonites armatus, A. Jamesoni, A. margaritatus, Belemnites elongatus;* the Upper Lias by *Ammonites communis, A. serpentinus*. The Lower Oolite is characterised by *Ammonites Murchisonæ, A. Humphriesianus, Belemnites giganteus;* while the Oxford Clay yields *Belemnites sulcatus, B. gracilis*, and *Ammonites cordatus*.

Cretaceous System.—Between the Jurassic and Cretaceous strata of the West Highlands there is a great unconformability, indicating striking changes in the physical geography of the region, and extensive denudation of the deposits which had accumulated during previous periods. During this interval there must have been an elevation of the floor of the sea in the northern areas, and the various subaerial agencies must have removed in part the older Secondary strata which had been laid down on the tableland of the Highlands. When this elevation took place, we have no precise means of ascertaining, but if we take the evidence supplied by the Sutherland sections in connection with that of the West Highlands, then we have a connected story up to the horizon of the Upper Oolite. As already stated, this latter group is not represented on the west coast, at least it has not as yet been detected in that region. The continuity of the geological record in the West Highlands is further interrupted by the absence of the representatives of the Weald and the Lower Greensand (Neocomian); for, according to Professor Judd, the lowest beds of the Cretaceous strata belong to the Upper Greensand, yielding *Nautilus Deslongchampsianus, Exogyra conica, Pecten asper, P. orbicularis*. These are overlain by estuarine sandstones, followed by beds of white chalk, with flints containing *Belemnitella mucronata*, and numerous fragments of *Inoceramus;* while at the top of the series occur sandstones and marls, with plant remains and thin seams of coal. From the character of the strata in this brief succession, it is evident that there must have been an alternation of estuarine and marine conditions similar to that which characterised the deposition of the Jurassic rocks. In the north-east of Scotland no Cretaceous strata have been found *in situ*, but there can be little doubt that they must have been deposited in that area, from the number of smooth blocks of chalk and chalk flints, containing numerous fragments of *Inoceramus*, which are found in the drifts of Banffshire, Aberdeenshire, and other counties; indeed, it is not improbable that Cretaceous strata may occupy a portion of the bed of the Moray Firth.

Tertiary Volcanic Rocks.—At the close of the great series of Secondary formations there is a further blank in the geological history of Scotland. The records which we have now to consider reveal to us an era of extraordinary volcanic activity, when great sheets of lava were piled on each other to an enormous depth, and were spread over an extensive territory reaching from Antrim, by the Inner Hebrides, to the Faroe Isles and onwards to Iceland, where volcanoes are active at the present day. Visitors to the West of Scotland are familiar with the striking scenery associated with this volcanic episode, as displayed in the terraced basaltic plateaux of Mull and Skye, and the far-famed Fingal's Cave in the island of Staffa. Associated with this phase of volcanism, there is a remarkable series of 'dykes' or fissures filled with basalt, which are traced from Yorkshire to Orkney, and from the north of Ireland to the east coast of Scotland—an area which is probably not much less than 100,000 square miles. A glance at the Geological Survey maps of the country will show how these dykes, on the whole, maintain a wonderfully straight course, how they pierce all older geological formations, including the chalk, and how they increase in number as we approach the edge of the basaltic plateaux. After a visit to the great lava fields of Idaho in Western America, where an extensive plain is covered with a succession of parallel sheets of basalt several hundred feet thick, with no apparent cones or craters from which the molten material could have been discharged and hence believed to be due to fissure eruptions, Dr A. Geikie suggested that the volcanic plateaux in the West of Scotland were due to fissure eruptions, and that the dykes represent the fissures, from which the basaltic lavas were ejected. On the other hand, according to Professor Judd, there are, in Mull, Skye, Rum, St Kilda, and Ardnamurchan, the relics of great extinct volcanoes and several minor cones, belonging to three distinct periods of igneous activity. The first period was characterised by the discharge of acidic lavas and ashes, the molten material consolidating into granite and syenite in the deeper portions of the craters; the second by the ejection of basaltic lavas, which, on reaching the surface, spread out in great horizontal sheets, but at the roots of the craters the igneous material crystallised into coarse dolerite and gabbro like the rocks of the Coolin Hills; the third period was marked by the appearance of small sporadic cones in the neighbourhood of the extinct volcanoes, from which issued minor streams of lava. He contends that each of these phases of volcanic activity was separated by intervals of long duration, when the igneous materials were extensively denuded, and suggests that they may be correlated with the three divisions of the Tertiary period. The only organic evidence bearing on the age of the great basaltic plateaux is the occurrence of leaf beds, discovered by the Duke of Argyll between the old lava streams at Ardtun in Mull—a discovery of great interest and importance, as it revealed the nature of the vegetation of the period, and proved that the lavas must have been subaerial and not submarine. The plants grew in pond-like hollows on the surface of the lava during one of the pauses in the volcanic eruptions, and were eventually buried underneath successive streams of igneous material. Such is the origin of the beds of lignite, occurring in the basaltic plateaux of the West Highlands and Antrim.

From an examination of the plants found in Mull, comprising *Sequoia Langsdorffii, Rhamnites major, Equisetum Campbellii, Corylus grosse-dentata, Cinnamomum, Platanites Hebridicus*, etc., Professor E. Forbes and Professor Heer concluded that they were of Miocene age. Quite recently, however, the suggestion has been thrown out by Mr Starkie Gardner, that the flora may be of Eocene age; but the former classification has been generally accepted by geologists.

A remarkable feature connected with the Miocene volcanic rocks is the striking evidence which they afford of the denudation of the country since that period. On the crests of Beinn-y-Hattan (2308 feet) and Beinn-y-Hun in Morvern there are small outlying patches of these basaltic lavas resting on Upper Cretaceous strata, while the latter rest unconformably on the metamorphic rocks of the Highlands. Originally these outlying patches were continuous with each other, and with the sheets lying further to the west; but since that time deep valleys have been excavated in the old tableland by the simple agents of denudation. In short, the evidence points to the startling conclusion that the valley system of the Highlands has been excavated since Miocene time. It is also apparent that the valley system of the Southern Uplands has been sculptured since that period, from the fact that the basalt dykes cross hill and dale without the slightest indication of their having formed any lava flows in the bottoms of the valleys. Had the latter been in existence at that time, the molten lava would assuredly have issued from the fissures and flowed down the glens.

Though Pliocene deposits do not occur in Scotland, still several typical Crag shells, such as *Astarte mutabilis, Voluta Lamberti, Fusus contrarius*, etc., have been found by Mr Jamieson of Ellon in the glacial deposits of Aberdeenshire, thus indicating that originally they were laid down in that area, though they have been since removed by denudation.

Post-Tertiary Deposits.—The great series of glacial and post-glacial deposits, so typically developed in Scotland, forms one of the most fascinating chapters in the geological history of the country. Indeed, this branch of the science has proved so attractive, that quite a small army of observers have within recent years added largely to the literature of the subject. However desirous we might be to indicate the valuable researches of many well-known investigators of glacial geology, our space forbids us to do more than call attention to the publication of two important works * by Professor James Geikie, in which the history of these deposits is admirably told. To these the reader is referred for a clear and forcible statement of the evidence bearing on the subject, and the strange story which it unfolds. The limits of this article preclude us from giving in detail the succession of the glacial and post-glacial deposits, and we shall therefore merely describe some of the geological changes which they indicate. From an examination of the glacial deposits, geologists are generally agreed that Scotland then experienced an Arctic climate, similar to that in Greenland at the present day. From the Highlands and the Southern Uplands, glaciers descended, till eventually they coalesced and formed one continuous sheet of ice, which united with the ice-fields of England, Ireland, and Scandinavia. It was during this vast extension of the ice that the rounded outline of our hills was developed, rock-basins were excavated, and an extensive covering of boulder clay with striated stones was formed. The presence of stratified sands, gravels, clays, and peat with mammalian remains, in the boulder clay, proves that milder conditions must have prevailed at long intervals, when the ice retired or disappeared from the surface of the country. Few, indeed, are the fossils found in these stratified deposits, but such as they are, they give us a glimpse of the climatic conditions which prevailed during inter-glacial periods. Then the mammoth, the reindeer, the horse, the great ox, and the Irish elk wandered along the valleys, and vegetation, characteristic of cold temperate climes, sprang up vigorously on the moors and hill slopes; the streams were busily at work in excavating hollows in the underlying boulder clay and laying down alluvial deposits of sand, gravel, and loam. But though it is certain that many of these accumulations are of fresh water origin, yet we have conclusive evidence that during the last inter-glacial period Scotland was submerged to a depth of 526 feet, as is clearly proved by the occurrence of arctic shells in stratified brick-clay between two deposits of boulder clay at Airdrie—a submergence which is confirmed by similar evidence in the counties of Aberdeen, Banff, and Inverness. Once more the glaciers advanced and ploughed out to some extent the marine deposits which were commingled with the stony clay underneath the ice, thus giving rise to a shelly boulder clay. The latter is chiefly confined to maritime districts, and when compared with the development of unfossiliferous boulder clay, it may truly be said that it occupies very limited areas. There are certain exceptions, however, where it is traceable over a wide extent of country, as for instance in Caithness and Orkney; but the detailed examination of the glacial phenomena of these counties leads to the conclusion that the shelly boulder clay was accumulated during the climax of glacial cold when the Scottish and Scandinavian ice-sheets coalesced on the floor of the North Sea and moved north-westwards to the Atlantic. The arctic shells were derived from the bed of the German Ocean and the Northern Firths, while the various blocks of Secondary rocks, which are foreign to Caithness and Orkney, were obtained from areas in the north-east of Scotland lying in the path of the ice. During the recession of the last ice-sheet vast quantities of sand, gravel, and boulders were accumulated in the valleys and plains, now represented by the high-level terraces and torrential gravels. Many of the great moraines at the mouths of the Highland glens, and many of the tortuous kames in the low grounds, were formed during this retreat of the ice. After the glaciers had shrunk back to the mountain glens it would appear that the sea stood at a level of about 100 feet higher than at present, when the stratified clays and sands containing arctic shells were slowly deposited. The boulders occasionally met with in this ancient beach, which have travelled far from their parent source, suggest the presence of masses of floating ice; while the curious crumpling of the finely laminated clays probably indicates that coast ice may have been driven along the shore by the prevailing winds. At length a movement of elevation supervened, when Britain was united to the Continent of Europe and the North Sea became dry land. Across this land passage the fauna and flora of Central Europe migrated to our hills and valleys; it was then that the new stone men took possession of the soil; it was during this Continental period that Scotland witnessed the great growth of forests. Geographical changes again ensued, the land was submerged, and Britain was fortunately severed from the Continent. Finally, the submergence gave place to a slow movement of upheaval when the 50-feet and 25-feet beaches were eroded at successive stages in the elevation of the land. Such are some of the marvellous revolutions of climate which marked the close of the geological history of Scotland.

* "Great Ice Age," and "Prehistoric Europe."

V. METEOROLOGY.

By Alexander Buchan, M.A., Secretary of the Meteorological Society of Scotland.

Climate is that peculiar state of the atmosphere in regard to temperature and moisture which prevails in any given place, together with its other meteorological conditions generally in so far as they exert an influence on animal and vegetable life. The three principal elements which give their character to the various local climatologies of the country are height above the sea, the temperature, and the rainfall; the two latter of these elements being more specially considered with reference to the way in which they are distributed through the seasons.

In describing climate, the first place must unquestionably be given to the temperature of the district during the different months of the year, it being this which portrays the main features of the climate, and not the mean temperature of the whole year. Thus, while the annual temperature of the east and west coasts are nearly equal, the winter and summer temperatures are widely different. At Oban the winter and summer temperatures are 39°.4 and 57°.2, whereas at Barry, in Forfarshire, they are 37°.2 and 59°.0, the annual range of temperature being thus respectively 17°.8 and 21°.8. In this brief notice of our Scottish climate the remarks on temperature will be confined to January and July, inasmuch as they are representative of the two extreme seasons of the year. The accompanying two small charts show the isothermal, or line of equal temperature, for these months, which thus offer in a handy form the climatic phases of the temperature.

The Winter Temperature.—The outstanding feature of the lines of winter temperature is their general north and south direction; and hence they are approximately parallel to the meridians and at right angles to the parallels of latitude. From this direction of the isothermals it is plain that the peculiar geographical distribution of the winter temperature is not determined by the sun, but is ruled by the ocean, which imparts its greater warmth to the climate by the prevailing westerly winds. The Atlantic may be regarded as a vast repository of heat, in which the higher temperature of the summer months, and in some degree that of more southern latitudes also, is treasured up in reserve against the rigours of winter. Further, during exceptionally cold seasons, the ocean effectually protects all places in its more immediate neighbourhood against such severe frosts as occur in inland situations.

Owing to the prevailing south-westerly winds, and the oceanic current to north-eastward resulting therefrom, the temperature of Scotland is in all seasons much higher than is due to its position on the globe. It is in the winter months that this beneficial influence of the ocean is most strikingly apparent in maintaining a temperature very greatly in excess of what is due to mere latitude and season; and this influence is the more decided just in proportion as the locality is surrounded or enveloped by the warm waters of the Atlantic. Thus in Shetland the temperature is 32°.5, and at Edinburgh 27°.0, higher than would otherwise be the case. In other words, but for the ameliorating influence of the Atlantic, which the prevailing south-westerly winds spread over the country, the mean temperature of Edinburgh in mid-winter would be 12°.5, and of Shetland 7°.5, or such winters as characterise the climates of Greenland and Iceland.

Leaving the question of height out of consideration in the meantime, it will be seen from the isothermals that the lowest temperature occurs in the strictly inland parts of the country, the temperature being lowest at all places situated within the region marked off by the isothermal of 38°.0. Along the whole of the eastern seaboard, from John o' Groat's southward, the temperature is higher than what is found a little way inland to westward. But it will be seen that the ameliorating influence of the North Sea is very much less potent than that of the Atlantic. The extreme lowest temperature which has hitherto been observed to occur in Scotland, and, indeed, anywhere in the British Islands, was – 16°.0, that is, 16° below zero, or 48°.0 below freezing, at Springwood Park, near Kelso, during the great frost of December 1879.

The Summer Temperature.—Very different is the distribution of temperature in July from what obtains in January. Everywhere throughout the west temperature is lower than in the interior and in eastern districts. In winter the coldest climates are in inland situations; in summer, on the contrary, the warmest climates are in the central districts. The course taken by the isothermal of 59°.0 over Scotland is extremely interesting. In the south-west the depressing influence of the Atlantic in lowering the temperature is very strongly marked, and this influence is felt a very long way into the interior of the country; and the influence of the land, particularly of the highlands in the west, in depriving the south-westerly winds of their moisture, and thus clearing the skies of eastern districts, is marked in a manner equally striking, but in an opposite direction, in raising the temperature. From the head of the Solway Firth to Aberdeen northward temperature falls only 1°.0, whereas for the same distance further to the northward the summer temperature falls 3°.0. Over eastern districts there is comparatively little difference of temperature from the Solway to the Moray Firth; whereas from the Mull of Galloway to Cape Wrath the difference is great. The summer isothermal of 56°.0, as marking the northern limit of the successful cultivation of barley, deserves particular attention. To the north of this line the coarser varieties of barley and oats are cultivated, but the climate is decidedly better suited for the rearing of stock. The isothermal of 59°.0 marks off that portion of Scotland where, owing to the higher temperature, diarrhœa and other bowel complaints raise the death-rate among infants higher than elsewhere during the warmest months of the year.

The Rainfall.—The rainfall is determined by those causes which tend to lower the temperature of the air below the point of saturation, the chief of these being the march of temperature through the year, the character of the winds as regards moisture or dryness, and the physical configuration of the earth's surface over which they blow. Since with a rising temperature the capacity of the air to retain its moisture is increased, and with a falling temperature diminished, the smallest amount of rain might be expected in spring, and the heaviest and most frequent rains in autumn. Though observation confirms this expectation in a general way, yet in respect of particular months the rainfall by no means follows the annual variations of temperature owing to the interference of the seasonal changes of the prevailing winds.

Our prevailing south-westerly winds come laden with the moisture they have licked up from the Atlantic on their way; and losing heat as they proceed into higher latitudes, have consequently to part with some of the moisture with which they are charged. They are therefore, generally speaking, rainy winds. On the other hand, the north-easterly winds are very often dry and rainless winds, since being dry at the outset, and getting warmer as they proceed southward, their dryness is still further increased.

Taking the year as a whole, there is nearly twice as much wind from the south-west as from the north-east, but the proportions vary markedly with the different months. The south-west wind prevails most during July, August, September, and October, and again during December, January, and February. It is accordingly in these months that the rainfall is heaviest. It is here to be noted that these two periods are the summer and winter portions of the year, and one important consequence of the prevalence of the moist winds and accompanying rains which mark the annual extremes of temperature is to imprint a more strictly insular character on our Scottish climate by moderating the heat of summer and the cold of winter. In March, April, May, and June, and again in November, the north-east winds acquire their greatest frequency. These, accordingly, are the driest portions of the year.

If the physical configuration of Scotland was approximately level, the rainfall would everywhere on an average of years follow the temperature and prevailing winds, increasing with south-westerly winds and a falling temperature, and diminishing with north-easterly winds and a rising temperature. But the surface of Scotland is most mountainous, the principal mountain systems approaching the west, from which the more important valleys and plains spread out eastward to the North Sea, whilst on the other hand, to the westward, the valleys are steeper and much less extensive, and the course of the streams and rivers rapid and short.

When the south-westerly winds arrive on our coasts they are turned out of their horizontal course by the hills in the west, and being forced into the higher regions of the atmosphere their

temperature is lowered, and the vapour is formed into clouds, and deposits in rains the water which they can no longer hold in suspension. It is thus that the climate of the western districts of Scotland is essentially wet. On the other hand, the climate of eastern districts is dry, because the land there is more level and less elevated, and the clouds borne thither by the south-westerly winds have been already robbed of most of their superabundant moisture in crossing the western hills. It is evident that the driest climates in the east are those that have between them and the Atlantic to south-westwards the greatest extent of high mountainous ground; and the wettest eastern climates those regions which are least protected by high lands to westwards. Thus the breakdown in the watershed between the Firths of Clyde and Forth exposes the whole of western Perthshire, the counties of Clackmannan and Kinross, and a large portion of Fife to the rains and clouds of the west, and their climates are in consequence considerably wetter than those of any other of the eastern slopes of the country. On the other hand, the driest climates of the east are on the Tweed, about Kelso and Jedburgh, the low grounds of East Lothian, and those surrounding the Moray Firth from Elgin to Dornoch.

The rain-bringing winds from the south-west extend to a great height in the atmosphere, so that in the west the rainfall in similar situations closely follows the height. In the east, on the contrary, the rain-bringing easterly winds do not extend far inland, and they do not appear to reach any great height in the atmosphere. These easterly winds on certain occasions pour down over a comparatively narrow belt along the east coast deluges of rain such as occur nowhere in the west, except at places where the annual rainfall amounts to or exceeds 80 inches. In the west a fall of 2 inches in one day is a very rare occurrence at places whose annual rainfall is only 60 inches or under; whereas in the east, even in the driest districts, a daily fall of 2 inches not unfrequently occurs. A fall of 3 inches in one day has repeatedly been noted, and even 4 inches has been nearly reached, as in Edinburgh in August 1877. The greatest falls with easterly winds take place in comparatively narrow valleys looking eastwards at no great distance from the coast, and in flat low-lying districts. It is during the times of these heavy easterly rains that the clearest, finest weather is experienced in the West Highlands.

There is another class of very heavy rains often peculiarly disastrous to agriculture yet falling to be considered. These are the rains attendant on thunderstorms. In peculiarly western districts they seldom occur, and never in any excessive degree. In western climates thunder is a rare phenomenon in summer. It is in wide, extended, level straths and plains, at no great height, where thunderstorms most frequently occur in summer, and accordingly it is in such districts where the summer rains are heaviest, raising, indeed, the rainfall of the summer months to the maximum of the year. By these rains much damage is often done to growing crops.

As regards the health of the people, the greatest scourges of our Scottish climate are bronchitis, pneumonia, and other diseases of the air passages, which attain their maximum fatality in the winter; diarrhœa and other bowel complaints which are most fatal, mainly among infants and the very aged, during the hottest season; and nervous complaints, including consumption, which go to swell the death-rate during the dry parching weather of spring when east winds prevail. The statistics of the Registrar-General show that when the temperature rises towards and above 60°, the mortality rapidly rises from the prevalence of bowel complaints; and that when it falls below 50°, the death-rate is largely augmented by an increasing fatality from throat complaints. The healthiest temperatures being thus from 50° to 60°, Scotland is climatically a healthy country, since for six months the temperature ranges between these degrees, and in summer seldom rises much above 60°, and in winter does not fall to any very great degree below 50°.

The mildest climates for winter residences for invalids are to be found down the Clyde at Helensburgh, in Bute, parts of Arran, and the seaboard of Ayrshire, where the rainfall is not excessive, and where the temperature is as high as it is anywhere in Great Britain, except the south-western counties of England and Wales. In spring the most desirable residences are, generally speaking, those situated at the greatest distances from the Continent, where the east winds are least severely felt, unless as in the case of the Bridge of Allan, which is sheltered by hills and wooded rising-grounds from the penetrating and enervating east winds.

The most enjoyable and bracing summer residences are in those districts where the height above the sea is 500 feet and upwards, and the rainfall moderate in amount. The best of these are to be found on Upper Deeside, Upper Speyside, large portions of the east of Perthshire, and in the highlands of the south-eastern counties. To many, despite the heavy rainfall, the Western Highlands offer strong attractions in the total change of climate they afford, with its marvellous atmospheric effects of light, shade, and colour. Special reference may be made to the western regions of the counties of Ross and Sutherland, which, being sheltered by Skye and Lewis to westward, have a greatly diminished rainfall, and abound in the most striking and diversified scenery, ranging from stern grandeur to the softest and richest beauty.

VI. AGRICULTURE.

By James Landells, late Sub-Editor of the *North British Agriculturist.*

The Agriculture of Scotland is closely bound up with the prosperity of the country. Here, as in other parts of the United Kingdom, it forms the staple industry, absorbs the greatest amount of capital, and makes the largest demands on the energy, skill, and perseverance of its workers; while it is dependent more than any other trade on the character of the seasons and other fluctuating circumstances beyond human control. As showing the relative importance of agriculture to the other great industries of the country, Professor Leone Levi, calculating the 47,000,000 acres of land under cultivation in the United Kingdom at an average of £5, 10s. per acre, brings out the astonishing total of £258,000,000 of capital invested in agriculture, as compared with £80,000,000 for the cotton manufacture, £40,000,000 for the woollen, £30,000,000 for the iron industry, and £70,000,000 for the mercantile marine. Yet agriculture has been left almost entirely to its own resources, and its present high condition, compared with what it was a century ago, is due more to the intelligence, skill, energy, and enterprise of farmers themselves, than to the fostering care of the Legislature. At no previous time was the British agriculturist so well equipped as at present with all necessary appliances for extracting the utmost that the soil can yield, and never before has he been in a worse plight. The farmer is undoubtedly heavily handicapped in his profession, and what with high rents, stringent clauses in his lease, somewhat harsh Land Laws, high and unequal railway tariffs, and bad seasons, he has not been able to hold his own with the foreign competitor. With an unkindly soil and an ungenial climate, Scotland is less favourably situated than the southern part of the kingdom, but Scotch farmers, though pursuing their occupation under greater difficulties, have distinguished themselves more than those of any other country in the successful cultivation of the land; and to their native shrewdness, clear judgment, and resolute determination, may be traced the great progress that has been made by agriculture in Scotland during the last hundred years.

Prior to the Union, the agriculture of Scotland was hardly worthy of the name, as compared with the enlightened and skilful modes of cultivation now practised. Farms were small in size; pastures were poor, no artificial grasses being sown; there was little encouragement for the rearing of stock, owing to the low prices realised; the greater part of the country was unenclosed; plantations were almost unknown; roads and bridges had not come into existence, and the means of conveyance were of the most primitive character; artificial drainage had not been introduced; and tillage was restricted to the naturally dry land, the low-lying portions being for the most part bogs and marshes, which had an injurious effect alike on the people and their stock. In the second half of the eighteenth century, agriculture began to advance; stock-breeding received more attention; and a large cattle trade was done with England, to which the young Scottish animals were driven to be fattened on the richer pastures of the south, and there was in consequence a great increase in prices. The land, which had been split up into small farms, cultivated by the occupiers without the aid of hired labour, began to be consolidated, and was let on lease in larger holdings to the tenants who possessed most capital. The ruinous practice of exhausting the soil by taking successive crops of corn was abandoned; green crops alternated with grain, and the improved system of husbandry soon became manifest in the character of the land. A great revolution was, however, effected by the introduction of turnip husbandry, which, followed by the use of artificial manures, and the application of steam power both by land and water, opening up fresh outlets for stock, gave a new phase to Scottish farming. It was about 1764 that Mr Dawson of Frogden, a young Berwickshire farmer, hired himself for a few months to the celebrated Mr Bakewell of Dishley, Leicestershire, and having mastered the details of turnip culture, returned and put them into practice on his own farm. Thus was introduced to Scotland the most valuable root grown on the farm, and one which has ever since had a powerful influence on the agriculture of the country, about 490,000 acres being now grown annually.

Shortly before the close of the eighteenth century the farms were enclosed by fences and divided into fields of convenient size for carrying on a regular rotation of cropping; good roads began to be formed; the land was improved by the application of lime; the swing-plough took the place of the old-fashioned Scottish implement, drawn by oxen; the thrashing-mill was brought in to supplant the flail, though it was some years later before it was in general use; new field crops, notably the Swedish turnip, were being introduced, together with improved breeds of stock from England; and Scottish agriculture was progressing steadily and satisfactorily, when a great impetus was given to it by the outbreak of the wars of the French Revolution. In 1795, with a deficient harvest and the stoppage of foreign supplies of grain, the price of wheat, which for the twenty preceding years had been under 50s. per quarter, rose to 81s. 6d., and in 1796 to 96s. With the high prices then given for farm

produce, farms were improved and large tracts of waste land reclaimed. A sufficient indication of the great strides that had been made during the twenty years of the Continental wars, lies in the fact that the agricultural rental of Scotland had been nearly trebled, having increased from £2,000,000 in 1795 to £5,250,000 in 1815. A period of disaster and depression followed the termination of the war. Wheat, which in 1812 brought 126s. 6d. per quarter, fell to 109s. 9d. in 1813, and to 74s. 4d. in 1814, when farmers were somewhat startled, but they were thrown into quite a panic when it declined to 44s. 7d. in 1822. It can be easily imagined what would have been their state of mind if they could have looked forward, sixty-two years afterwards, to getting only 26s. per quarter, without Protective Corn Laws, and with immense importations of grain from abroad, greatly increased rents, and the cost of labour doubled. At the end of the first quarter of the present century a revival of trade set in, and with good crops and enhanced prices, agriculture began once more to look up. Ground bones were first introduced as a manure to Scotland in 1825, and the great stimulus thus given to turnip-growing had the effect of bringing many acres of poor, neglected land under cultivation. Steam was being more largely applied to the operations of husbandry; thorough draining and deep ploughing completely transformed the face of the land; a network of railways was spreading over the country and affording easy facilities for the conveyance of manures, feeding stuffs, and farm produce; science came to the aid of the farmer, and instructed him in the ingredients necessary for plant growth; and the agricultural engineer provided him with machinery in every branch of his industry, which expedited his work and placed him in a greater measure independent of the weather in securing his crops. All these contributed to advance the value of land and greatly increase rents. A scientific education is now forming part of the training of most young farmers in Scotland, and a knowledge of chemistry is being more generally recognised as essential to good farming. The farmer depends no longer on farmyard manure alone, but has recourse to the various artificial fertilisers now manufactured in such large quantities throughout the country; and chemistry will teach him the value and enable him to understand the application of nitrogen, phosphates, and potash, in the growth of cereals, roots, and grasses.

It is not always, however, the scientific or practical man that takes to farming, and the great depression which at present prevails in agriculture is due in some degree to the embarking in farming of many whose only experience was gained behind the counter, or in some trade that was but remotely connected with agriculture, and who were accepted as tenants because the landlord had his rent secured by the Law of Hypothec. In the prosperous times of about 1873, when there were good seasons and bountiful harvests, there was a great inclination to possess farms. It seemed as if a new El Dorado had been found; and the reckless competition which then took place forced rents up to an unnaturally high level, and gave a fictitious value to the land. Such an unhealthy inflation of rents was opposed to all the laws of economical science, and the inevitable reaction came, sooner perhaps than was expected, and with a severity that has been keenly felt throughout the length and breadth of the land. It has brought many farmers to ruin, and no doubt many more are destined to suffer before they can get quit of their harassing engagements, but it has had one good effect, in that it has brought about a reform of the Land Laws, and an interference with freedom of contract, which would have been looked upon as revolutionary twenty years ago. Between 1852 and 1879, rents had increased 50 per cent., and the farmer's labour bill had gone up in a corresponding degree. Since then things have gone from bad to worse, and the year 1885 finds the farming interest in the midst of the deepest gloom. On most Scottish estates abatements of rent, varying from 10 to 50 per cent., have been granted, but these have not been effectual in terminating the distress. In the large number of farms that have of late been thrown into the market, rents have suffered a great reduction, and have come back to something like their normal standard, but a good many holdings have been left in the proprietors' hands, in different districts of the country.

The year 1879 was the fifth bad season in succession for the farmer, the losses at that time being reckoned in some districts as about equivalent to two rents. In addition to this, rents were high, there was great commercial and manufacturing prostration, and the imports of agricultural produce were unprecedentedly large. Some idea of the great losses sustained during the present depression may be gathered from an estimate made in 1881 by a prominent East Lothian farmer. There had been seven bad seasons between 1872 and 1881, five of which were of the very worst description. In 1872 he placed the loss to the farmers of Haddingtonshire at 100 per cent. on the rental, the whole of the rents of that year being paid out of capital; in 1873 he put the loss at 50 per cent.; in 1877 at 100 per cent.; in 1878 at 40 per cent.; in 1879 at 100 per cent.; in 1880 at 30 per cent.; and in 1881 the whole rent was again lost. So that in those nine years a farmer paying £1000 of rent had lost £4300. During the same period it was stated that five farmers, within a radius of twenty miles from Edinburgh, had lost £41,000. Prices for farm produce, particularly cereals, have greatly decreased during the last four years. For the ten years from 1871 to 1880, the average prices per bushel were:—wheat, 6s. 4⅔d.; oats, 3s. 1½d.; and barley, 4s. 8⅔d.: total, 14s. 3d. The average price in December 1884 was:—wheat, 3s. 3¼d.; oats, 2s. 8⅔d.; barley, 3s. 5½d.: total, 9s. 5½d.; or a decreased return per bushel of 4s. 9½d., which represents a serious reduction from the farmer's calculations when he entered upon his lease. In the period that elapsed between the abolition of the Corn Laws and 1880, the agricultural rental of Scotland had increased 49·5 per cent., amounting in 1880 to £7,776,910; but there will now be a considerable reduction on that figure. Affairs had become so desperate in 1879 that the Beaconsfield Government appointed a Royal Commission of Inquiry into the prevailing agricultural distress. After sitting for three years, the Commission, over which the Duke of Richmond and Gordon presided, gave in its report in 1882. They found that the two most prominent causes which were assigned for the distress were bad seasons and foreign competition, aggravated by the increased cost of production and heavy losses of live stock from disease. They recommended an amicable readjustment of rent; compulsory compensation for improvements where these had increased the letting value of the holding; the abolition of the Act of Sederunt, under which Hypothec still exists in Scotland; and that local taxes should be borne in equal proportions by landlord and tenant, the support of indoor poor, however, falling on the Imperial Exchequer. On the relations between the different classes interested in agriculture the Commissioners observed that 'no interference between classes, between owners and occupiers, or between employers and labourers, can render any one of them independent of the other. We cannot recall a period in our history in which the relations of these classes have been more severely tried than during the existing depression. Owners have as a rule borne their share of a common calamity, and they, as well as occupiers, have done much to avert the distress from the class who are least able to bear it. It is satisfactory that upon the labourer it has fallen more lightly than upon either owner or occupier. The best hope for the prosperity of agriculture lies in the mutual confidence and friendly relations of the three classes directly engaged in it, and in the common conviction that their interests are inseparable.' Since the report was written, matters have grown decidedly worse. Trade is more depressed, foreign competition is keener, prices for stock and farm produce have gone down, and the old restrictive clauses in leases remain. The Agricultural Holdings Act, which was the outcome of the Royal Commissioners'

report, is a well-directed measure, under which future tenants will benefit; but the farmer who had entered into contracts before the abolition of Hypothec, the passing of the Ground Game Act, and the Holdings Act, giving compulsory compensation for improvements, and who has yet some years of his lease to run, does not derive the full benefit of those measures, and he it is who is suffering most severely from the existing depression, and who is unable to get rid of obligations entered into under a much different order of things from what now prevails. There is a general agreement that the causes of the depression which at present hangs over the agricultural interest are due to bad seasons, want of capital, decrease in the price of produce and of wool, and the large foreign importations of grain and mutton. With wheat at 26s. per quarter, potatoes at 30s. per ton, wool at 9d. per lb., and a decline of 20 per cent. in the price of beef and mutton during the year 1884, the prospect is not encouraging. The land under present conditions refuses to yield its three profits to those who are expected to live by it—the owner, the farmer, and the labourer. Several nostrums have been put forward to solve the difficulty. Mr Gladstone at one time advised the cultivation of strawberries; another legislator suggested the rearing of poultry; and a third bee-keeping; while a small section have a hankering after Protection. Spade-culture is not likely to be reverted to, and only an insignificant body of agriculturists in Scotland would entertain any proposal for an import duty on corn; but greater attention might be devoted, with profit, to poultry and pig breeding, which are comparatively neglected on Scottish farms. Cattle may be expected to be more largely bred in this country in the future, stock having been the only paying article on the farm of late. The acreage under green crops is diminishing, and a greater breadth of land is being laid down to permanent pasture, and with the probability that wheat will go more largely out of cultivation in Scotland, there is a likelihood of farmers being benefited by increasing their head of stock.

Farmers, however, are crying out for something more definite in the way of remedial measures, and some of their demands will probably be conceded in the near future. As their views are formulated by the organisations which represent them, they desire the abolition of the Laws of Entail and Primogeniture, the Game Laws, and the Act of Sederunt, under which Hypothec continues; a simple form of land transfer, a County Land Court, freedom of cropping and free sale, so far as consistent with the rules of good husbandry; and a readjustment of rents to tenants sitting under agreements made prior to the passing of the Agricultural Holdings Act, or leave to quit the farm. There can be no doubt that the Law of Entail, which for two hundred years has curbed the agricultural industry of Scotland, is doomed, and with the land thus set free from the fetters which have bound it so long, proprietors will be in a better position than at present to meet their tenants in a fair and equitable spirit. The land in Scotland is owned by comparatively few proprietors, and the great bulk of their extensive territories is held in strict entail. With the abolition of that obnoxious statute, and a simple, economical, and expeditious mode of land transfer, there would be a sub-division of large estates, which would be attended with advantage to the proprietors as well as to the nation at large. The long-lease system has done good service in its day to Scottish agriculture, but there is a feeling that the time of its usefulness is now past, and the tendency is towards the English mode of tenure. A good proportion of farmers attribute the prevailing depression in large measure to the nineteen years' lease, which ties up the tenant to engagements which in bad times he is unable to implement; and with short tenancies the rotation of cropping could be better regulated to suit the changing conditions of the times without neglecting the proper cleaning and manuring of the land.

It has not always been recognised in this country that the labourer is worthy of his hire, and although a good deal has been done in recent years to improve his position and provide him with better house accommodation, much more might be accomplished in this respect, for it is a deplorable fact that a fourth of the people of Scotland live in houses of one room. The favourable opportunities which offer for farming in the West have been largely embraced by the best class of Scottish agricultural servants, both male and female, and as a result workers during the past few years became scarce, and the farmer found a difficulty in obtaining the requisite number of hands even at the high wages current. Up till 1876 farm labourers' wages had risen about 30 per cent. during a period of fifteen years, and although there has since been some slight reduction, the labour bill still forms a heavy item of the farmer's expenditure. The passing of the Franchise Bill in 1884 has placed a powerful weapon in the hands of the agricultural labourer, and has rendered him an important factor, and one that must be reckoned with, in all future legislation. Farmers no longer form a majority of the electorate in rural districts, and candidates for Parliamentary honours, to be successful, will now have to shape their conduct quite as much according to the views of the hind as the master. It remains to be seen whether there will be found that identity of interest between tenant and labourer that has always been said to exist between landlord and tenant. In any case there can be little doubt that the newly enfranchised farm-servant will aim at having a more direct interest in the land than he at present possesses. The abolition of entail and the establishing of short tenancies may in turn lead to a sub-division of the larger holdings, and such a result would not be without its advantages. There is much diversity of opinion as to what should be the size of arable farms, but from 100 to 360 acres will probably be found the most convenient and economical to work. A regular gradation in the size of farms is, however, best adapted for meeting the requirements of all classes. Small crofts, the evils of which are seen in the Highlands, are not desirable on any ground, but holdings that could be worked with a pair of horses are not so numerous as to hold out an encouraging prospect to the labourer that he may himself rise to the position of a farmer and reap the fruits of his own industry without having to go abroad.

The various agricultural societies that exist in every district of the country have done much to foster and improve the agriculture of Scotland, and it is to their influence that the present high character of our live stock is largely due. The Highland and Agricultural Society is the oldest in Scotland, having been established in 1784. Its centenary was celebrated in Edinburgh in 1884 by an exhibition of live stock, the like of which, both in point of numbers and quality, had never before been seen in a Scottish showyard. The society holds its annual show in the eight principal centres of the country, visiting in turn Edinburgh, Aberdeen, Dumfries, Kelso, Stirling, Perth, Glasgow, and Inverness. This action on the part of the parent society stimulated farmers in the different districts to greater exertions in stock-breeding, and as a result a large number of local societies have sprung up, under the influence of which great good has been done to agriculture generally. The Highland and Agricultural Society has a membership of 5384, and a reserve capital of over £70,000. During the hundred years of its existence it has been the pioneer of every movement having for its object the welfare of the agricultural interests, and the record of the society is the history of the progress that has been made by Scottish agriculture.

AGRICULTURAL STATISTICS.

The Highland and Agricultural Society of Scotland began in 1853 the collection of statistics relating to the agriculture of the country, and this work they carried on for four years, till, in 1857, it was dropped in conse-

quence of a misunderstanding with the Government. In 1866, however, the matter was taken up by the Government themselves, and since then the statistics have been published annually by the Board of Trade. The latest official returns were made on 4th June 1884, and these show that at that date there were in Scotland 4,811,813 acres under crops, bare fallow, and grass; 4326 acres used by market gardeners for growing vegetables and other garden produce; 1715 acres in nursery grounds; and 829,476 acres under woods. In 1857, when the statistics were first collected, the acreage under crop was 3,556,572; in 1867 there were 4,379,552 acres; and in 1877 there were 4,668,221 acres, so that there has been a steady increase in the acreage of land brought under cultivation. The following table shows the acreage under the principal crops:—

	1857.	1867.	1877.	1884.
Wheat,	223,152	111,118	81,185	68,716
Barley or Bere,	219,994	218,486	269,845	230,554
Oats,	938,613	997,120	1,024,882	1,045,895
Rye,	5,989	7,066	10,087	7,334
Beans and Pease,	42,873	30,239	26,680	23,441
Turnips,	476,691	484,800	506,757	484,998
Potatoes,	139,819	157,529	165,565	163,847
Mangold,	2,803	844	2,053	1,296
Carrots,	1,401	855	1,132	1,094
Cabbage, Kohl-Rabi, and Rape,	3,736	4,150	5,187	5,418
Vetches, etc.,	18,418	19,864	15,443	18,164
Clover and Grasses under rotation,	1,459,805	1,211,101	1,404,032	1,526,442
Permanent Pasture,		1,053,285	1,138,056	1,207,019

The total acreage of cereals in 1884 was 1,375,940, as compared with 1,412,679 in 1877; and of green crops, 674,817 acres, as against 696,137 seven years previous. There were, in 1884, 55 acres under flax and 27,540 acres of bare fallow, as compared with 243 acres of flax and 17,074 acres of bare fallow in 1877. The total head of live stock in Scotland at the different periods was as follows:—

Year.	Horses.	Cattle.	Sheep.	Pigs.	Total.
1857	185,409	881,053	5,683,168	140,354	6,889,984
1867	...	979,470	6,893,603	188,307	...
1877	188,736	1,102,074	6,968,774	153,257	8,412,841
1884	187,803	1,136,604	6,983,293	159,560	8,467,260

There were also, in 1884, a total of 2,307,092 poultry, made up of 64,551 turkeys, 36,598 geese, 263,872 ducks, and 1,942,071 fowls.

LIVE STOCK.

In no department of agriculture has Scotland made greater progress than in that of stock-breeding. Increased attention has within the last dozen years been paid to the improvement of the live stock of the country, and by careful mating of well-bred animals, and with special care in the selection of sires—using only those which possess, in a pronounced degree, the most valuable qualities of the breed, and therefore most likely to transmit them to their progeny—a remarkable change has been effected in the character of the stock now to be seen on the farms of Scotland, as compared with the stunted, ill-bred animals with which agriculturists were satisfied a generation ago. Much good has been done in this respect by the numerous agricultural societies which exist in every county and almost every district of Scotland, and which, by creating a healthy rivalry among neighbouring tenants, have proved an effective stimulus to high-class stock-breeding. Of the 187,803 horses in Scotland in 1884, 142,898 were used solely for the purposes of agriculture, and these were chiefly animals of the Clydesdale type, which belongs peculiarly to this country. The characteristics of the Clydesdale are well defined, and stamp it as the most serviceable and valuable breed of the equine species that has yet been produced. There is no authoritative record of the origin of the Clydesdale, but there is a pretty general agreement that its now almost perfect development is traceable to the introduction of foreign sires and the crossing of them with native mares. In several important features there is a great similarity between the Clydesdale and the English or 'Shire' horse, both of which are said to be descendants of Flemish stallions, brought over by King John, and mated with English mares; the produce finding their way to Scotland, and, by a further cross, resulting in the present type of agricultural horses. The English breed is larger, and possesses more substance than the Clydesdale, but the latter has a decided superiority in bone and muscle, with a compact and firmly-knit body, symmetrical head, and strong feet and pasterns, that render its strength more durable, and admirably fit it for heavy draught work. As the name implies, the home of the breed was originally in the valley of the Clyde, but as agriculture developed, a greater demand sprang up for horse-flesh, increased attention was paid to breeding, and as the Lanarkshire breeders produced the best quality, they received the highest prices. As a result the stock was introduced to every district, and became the recognised breed of the country. The west of Scotland no longer possesses a monopoly of high-class Clydesdales, for in recent years many of the most successful animals in the principal showyards have come out of Galloway, and not a few splendid breeding Clydesdales are to be found in the east of Scotland. But it is not only in its native land that the Clydesdale is valued. Every year large numbers leave our shores for the United States, Canada, Australia, and other foreign parts. Of late this export trade has become a regular business, to which some of the principal horse-breeders devote considerable attention, and their stock, which, as a rule, comprises the best blood that can be picked up, only changes hands at very handsome prices. This

demand from abroad has had the effect of greatly enhancing the value of agricultural horses in this country, and within the last twelve years prices for well-bred stock have been about doubled. Good young serviceable animals for the farm bring from £60 to £80, and second-rate horses realise from £40 to £50; while heavy draught horses, suitable for contractors' purposes, are not to be had under the 'three figures.' With the view of maintaining the excellence of the breed considerable efforts have been put forth by the various agricultural societies, which annually offer premiums ranging from £50 to £100, at the Glasgow Stallion Show in the spring, to induce owners to travel their stallions in particular districts, so that the farmers may have the benefit of good sires. The competition for these premiums is annually increasing, there having been 225 stallions shown in 1885. To this is due, in great measure, the immense improvement that has taken place in the agricultural horses of Scotland, and the extraordinary prices which in many cases they bring. The Clydesdale Horse Society, formed in 1878 for the purpose of maintaining the purity of the Clydesdale breed of horses, has now a membership of about 800, and the sixth volume of the *Stud Book*, issued in 1884, registered the pedigrees of 1287 mares, 818 stallions, and 470 foals. 'The Select Clydesdale Horse Society,' whose *Stud Book* is not confined, like that of the other society, to pedigree animals, was started in 1884, and numbers about 400 members, while about 500 entries were made in the first volume of the *Stud Book*.

There are four native breeds of cattle in Scotland—namely, the Ayrshire, the Polled Aberdeen or Angus, the Galloway, and the West Highland. All of them have distinctive characteristics, and each is peculiarly adapted to the district to which it belongs. The Ayrshire has a congenial home in the mild, moist climate of that county; the Polled Angus is well suited to the character of the north-eastern district; the more hardy Galloway thrives admirably on its native pastures in the south-west; and no better breed than the West Highland could be found to harmonise with the rugged grandeur of our rough mountain land. The Ayrshires are the principal dairy cattle in the country, and they are much valued for that purpose. Taking their name from the county of Ayr, where they were first found in anything like their present form, they are believed to be descended from the wild cattle of Scotland, but their development has been so great that it would be impossible to trace in them a resemblance to the unshapely animals that existed in the district a hundred years ago. Within that period the improvement of this breed has been very marked, not only in their general characteristics, but especially in regard to their milking properties; and they have now been brought to a point as near perfection as it seems possible to imagine. With beautiful flecked coat, chiefly brown and white, symmetrical and well-proportioned body, small and sweet head adorned with gracefully curved horns, and carrying a capacious udder that betokens her rich milking qualities, the Ayrshire cow is as neat and pretty a specimen of the bovine race as could be desired, and the breed is continuing to increase in popular favour as a type in every way peculiarly fitted for the requirements of the modern dairy farmer. Being more hardy, she requires less pampering than the little Jersey cow, and she surpasses all other milking breeds in the quantity of milk she yields in proportion to the amount of food consumed. The average yield per cow is from 480 to 500 gallons annually, which is a very remunerative return. The milk is rich in quality, and contains the essential ingredients for good butter and cheese. Though originally confined to Ayrshire—where, with the exception of a few shorthorn crosses bought for fattening purposes, they still form the only breed of cattle—they have now spread to Renfrewshire, Lanarkshire, Stirlingshire, Galloway, and Dumfriesshire; but they are found in largest numbers in the three south-western counties, which form the centre of the dairying district of Scotland. About a score of cows is considered a fair-sized dairy in Ayrshire, but in Galloway the dairies are much larger, and comprise from 50 to 100 cows. Farmers who wish to be relieved of the management of their dairies, let the cows to a bower, who either pays a fixed price in money, at so much per cow, or gives a certain quantity of cheese at the end of the year. This system of 'bowing' prevails somewhat extensively in Galloway, the bower taking all the necessary labour connected with the feeding of the cattle and the manufacture of the cheese. The pedigrees of 2534 cows and 676 bulls had, up till 1883, been recorded in the Ayrshire *Herd Book*, the membership of the Society being about 250.

The great beef-producing district of Scotland is in the north-east, where the Polled Aberdeen or Angus cattle have their home. Originating in Aberdeen and Forfar shires, this breed has spread so widely that it is now predominant in the counties of Aberdeen, Forfar, Banff, Kincardine, and Moray. These five counties contain nearly 300,000 cattle, or about one-third of the whole head in Scotland, and of these, 209,500 are young animals, two years old and under, the remaining 90,500 being cows. The cows are fair milkers, but their merit in this respect is not so high as to constitute them a breed specially suited for dairying purposes. It is as beef-producers that they have attained to eminence, and it is largely owing to the high character of the black Polls of the north-east that Scotland is assigned the premier place in the great English meat markets. 'Prime Scots,' as the beef is termed in the market reports, invariably tops the quotations, and the bulk of the consignments proceeds from the district in which the Polled Angus cattle are located. The animals are very pleasing to the eye, have a nice mellow skin, a symmetrical shape, and a carriage of much gaiety, with a splendid constitution fitting them for a varied climate. They take on beef very rapidly, and are brought to maturity earlier than any other Scottish breed. This gives them a considerable advantage, and their favour with the public being more than maintained, farmers are annually becoming more extensive stock-raisers. The shrewd breeders of the north-east have shown great skill in the management of their cattle, and in no other district of the country are there to be found so many fine herds of these beautiful black Polls, brought out in the very best condition. The breed owes much of its development to Mr W. Watson, Keillor, since whom the late Mr William M'Combie of Tillyfour—a name that was almost a household word among agriculturists—did perhaps most for its improvement,—his achievement at the Paris Exhibition of 1878, when with a group of his native Polls he defeated the exhibits of cattle from all other countries, doing more than anything else to bring the high qualities of the Polled Angus before the agricultural world. Since his death, however, there has been no falling off in the energy with which northern farmers have striven to promote their favourite breed, and at no former period of its history did it stand so high in the estimation of breeders in this country and on the other side of the Atlantic as in 1882 and 1883, when some remarkable prices were paid at public sales. During 1883-84 a very large number of breeding animals were exported to the United States and Canada, where their beef-making qualities commended them; and in consequence of this increased demand and the drain thus made on native stocks, prices went up by 'leaps and bounds,' and animals of good pedigree were only to be had for something like a ransom. The cream of some of the best herds were drafted away to fresh pastures, and it was with a pang of regret that many lovers of the 'blackskins' in their native district saw some of the most valuable animals of the breed picked up by the foreigner, but in these days of depression and want of capital the influence of the dollar easily prevails. At some recent dispersion sales in the north the prices were of such a fancy character that a few of them are worth recording as an indication of the favour with which the breed was then regarded. The Montbletton sale, near Banff, in September 1882, saw the beginning of the high prices, a seven-year-old cow bringing 325 guineas, and

her three-year-old daughter 295 guineas; the average of 40 animals being nearly £98. At Mains of Advie, Elgin, during the same autumn, 234, 210, 200, and 176 guineas were paid for cows, while a yearling heifer brought 225 guineas. A few days later the splendid herd belonging to the Earl of Airlie was dispersed at Cortachy Castle, when some extraordinary figures were recorded, the sale causing quite a sensation among breeders. The cows averaged 119 guineas; two-year-old heifers, 204 guineas; and yearling heifers, 132 guineas —the highest average ever obtained in the annals of Polled cattle. For a cow of the 'Erica' tribe, 500 guineas was paid, and 400 and 300 guineas for two other cows; two-year-old heifers brought 360 and 310 guineas; yearling heifers, 380 and 280 guineas; and even a heifer calf realised 300 guineas. The autumn of 1883 saw another sale that will be memorable in polled circles, when the Bridgend herd, belonging to Mr R. C. Auld—a nephew of the late Mr M'Combie of Tillyfour—was disposed of. Five cows of the 'Pride' tribe averaged no less than £310, 16s. each. Mr Auld bought a Polled cow—one of Mr M'Combie's famous Paris group—at the Tillyfour sale in 1880 for 270 guineas, a price that was looked upon at the time as the height of extravagance. The cow had a heifer calf in each of the three succeeding seasons, and when all four were brought to the hammer in 1883 they realised the handsome total of 1365 guineas. The dam brought 385 guineas; her two-year-old heifer, 220 guineas; the yearling heifer, 510 guineas; and the calf, 250 guineas. Allowing an ample margin for keep, there was a clear profit on the transaction of over £1000, which is a sufficient indication of the extent to which prices for Polled cattle have advanced. The Polled Cattle Society, established in 1879 to promote the interests of the breed, is in a very flourishing condition. Up till 1884 the pedigrees of 3408 bulls and 8044 cows had been registered in the *Herd Book*.

The Galloway is in many respects similar to the Polled Angus, but it has some characteristics which stamp it as a totally distinct breed. The colour is the same, but their coats are rougher and their constitution hardier, enabling them to withstand the rigours to which they are exposed on their native pastures. They do not reach maturity quite so early as the Polled Angus, but they thrive well on high-lying and exposed situations, to which the cattle in the north-east are unaccustomed. Of late years a demand has sprung up for them in America, and their value has in consequence been much enhanced. They have been found an excellent breed for 'roughing it' on the prairie ranches of the Far West, and numerous consignments are now shipped annually. One valuable characteristic which they possess for ranching purposes is the suitability of the bulls for crossing with horned cows, with the almost certainty of the produce being hornless. It is this impressiveness on the part of Galloway sires, together with their hardiness of constitution, that has brought them into so much prominence. A favourite cross with butchers is that between a Galloway cow and a Shorthorn bull—the progeny being generally of a bluish-grey colour; but the pure Galloway is also deservedly held in esteem on some of the best low country farms in the district as a fairly good milker. An impetus was given to cattle-breeding in Galloway during the eighteenth century, when large droves were taken to England, chiefly to the counties of Norfolk and Suffolk. That trade went on increasing during a great part of the present century, but with the development of railways the droving business began to die out, and it has now altogether ceased, although large numbers of black cattle still continue to be despatched to the best grazing districts of the South, where they are finished for the fat markets. A greater number are, however, now fattened at home, but with the extension of turnip husbandry the head of native cattle in the province has been much reduced, and sheep have gradually taken their place on many arable farms, while they have also been largely supplanted during the last thirty years by the Ayrshire breed. The best of the young Galloway bulls are disposed of, when a year old, at a sale held at Castle-Douglas in the spring, under the auspices of the Galloway Agricultural Society. There is always a large entry from the principal herds, and there is an unusually keen competition for what is known as the 'blue ribbon' of the breed. Prices for ordinary bull stirks range from £15 to £25; but the choicest of the pedigree animals realise £30, £40, £50, £60, and £70. The store cattle are generally sold as two and three-year-olds to low-country graziers or dealers. The Galloway Cattle Society, established in 1877, has done much to bring the breed forward, and to emphasise its good points; and the latest volume of the *Galloway Herd Book* shows that 3321 bulls and 8087 cows and heifers have been registered. An American Galloway Cattle Society has also been started recently, and promises to be attended with success in promoting the breed in that country, where it has now firmly established itself. In the beginning of this year, at the New Orleans Exhibition, an imported Galloway bull gained the champion prize, in competition with all other breeds, for the best killed carcase.

It is universally conceded that the most picturesque breed of cattle is that now known as the West Highland. Many a landscape and animal painter has found them of invaluable service in turning out a pleasing picture, and in innumerable instances they have been thrust on to the canvas to heighten the effect of scenes with which they have little or nothing in common. Valuable as they have been to the artist, however, they fulfil a more useful function in the agriculture of Scotland, and continue to justify their existence as a breed whose place could not be effectively supplied by any other. Whether on their native heath-clad slopes or browsing in a nobleman's policies, there can be no finer sight of animal life than a herd of these noble-looking 'Kyloes,' whose presence adorns alike the bleak mountain-side, the busy market-place, and the luxuriant park. The West Highland ox reaches the height of his beauty at the age of four years. His shaggy coat has then its best covering of hair; his magnificent head and horns have attained all the perfection of maturity; his long, level back, well-filled quarters, and finely arched ribs, are fully developed; and his quick, fearless eye is alive with brightness and fire. At this age, when in the best of bloom, their prices range from £18 to £24. Argyllshire is the greatest cattle-breeding county in the Highlands, the number it contained in 1884 being 60,500. With comparatively few exceptions, these were all of the pure West Highland breed; and they also extend, on the mainland, into the counties of Ross, Inverness, Perth, and Dumbarton. They are admirably adapted to the peculiarities of the soil and climate of the Highlands, and although they have had in some measure to give way before the inroads of sheep, the purity of the breed has been well preserved. Their fine constitution has rendered them utterly regardless of wind and weather; in many parts of the west country they are never housed, and artificial food is only supplied during the severest winters. Their sustenance is therefore picked up almost entirely from the natural herbage on their mountain home. The colour of the West Highlander varies from black to white, dun, red, and brindled. The best cross from this breed is with the shorthorn, and it is believed that this intermixture might with advantage be much more largely developed, so as to produce a breed of cattle that would embody the most valuable characteristics of the hardy Highlander with the early-maturing, fat-forming, and rich milking properties of the shorthorn.

Shorthorns, though not a Scottish breed of cattle, have yet many admirers in this country, and some very fine herds of the 'red, white, and roans,' as they are popularly termed, exist in the northern and eastern districts. They are valued not only for their milking qualities, but in a larger degree as beef-producers, and they are extensively used for crossing with the Polled Aberdeen or Angus, which gives a very satisfactory result. Young shorthorn crosses are imported pretty extensively, for fattening purposes, from Ireland and the North of England

to the eastern and southern counties of Scotland, where they make rapid progress towards maturity. Several of the principal prizes at the leading English Christmas Shows are annually won by Scottish-bred Shorthorn or Polled cattle. Cattle-feeding in Scotland is very skilfully managed, and no part of farm husbandry receives greater attention from the farmer. The animals are fed under cover, either tied up or in loose-boxes, and with a judicious supply of roots, cake, and straw, they take on beef remarkably fast, and are ready for the butcher comparatively early. The advantage of covered courts for cattle-feeding—both with a view to the comfort and progress of the animals, and to the improvement of the manure—is now being generally recognised, and in very few districts are cattle fed in the open.

Scotland has more than one-fourth of the sheep in Great Britain, the number returned for the northern part of the kingdom in 1884 being 6,983,293, of which 2,393,826 were lambs. Between 1877 and 1881 very heavy losses were sustained by flockmasters throughout the country by the ravages of disease and the severity of the weather during the lambing seasons, and to such an extent were sheep stocks being reduced that Her Majesty the Queen, in the spring of 1883, issued an order prohibiting the use of lamb at the Royal table during that season. The flattery that takes the form of imitation was offered by all fashionable circles, with the result that lamb became a drug in the market, and prices in a short time fell as much as 10s. per head. The outlook for the hill farmer was very serious, and something like a panic prevailed among flockmasters. Her Majesty's resolution was, of course, taken with the view of preventing the slaughter of large numbers of lambs, so as to increase the quantity of breeding sheep, but the demand for lamb for home consumption having almost ceased, prices had fallen so low that the farmer could not sell, at anything like a remunerative rate, his usual crop for the hogging season. The outcry reached the Queen's ears, the Royal 'edict' against lamb was explained away, the aristocracy returned to their delicacy and mint sauce, prices resumed their normal position, and the temporary panic passed away. The well-meant intentions of Her Majesty were perhaps not without effect in checking the premature slaughter of young sheep, so as to procure 'early' lamb for the table, for since then the flocks of Great Britain have increased by about 2,000,000, while the number of lambs has risen from 8,745,884 in 1882 to 9,683,491 in 1884. The two purely Scottish breeds of sheep are the Cheviot and the Blackfaced, both with characteristics that adapt them to the varied conditions of the country; but there are also the Border Leicester, the Half-Bred, and the Blackfaced Cross, all of which enter largely into the sheep-farming of Scotland; while the Shropshire Downs are also spreading north of the Tweed, where they are becoming increasingly popular on account of their flesh-forming qualities and the high character of their mutton. The mountain breeds are the Cheviots and Blackfaces, with which the pastoral farms in the north and south of Scotland are stocked. On the lower grazings of hill farms Cheviots have been largely supplanted by half-breds, whose money value is greater, and on the higher grounds they are being displaced by the more hardy blackfaces, so that the once popular whitefaces have now disappeared from many grazings which a quarter of a century ago carried no other kind of stock. Both breeds are very active, but the blackfaced is much better suited for the higher ranges of the Highlands; the Cheviots preferring better pastures than the heath that is to be found on the hillsides. The wool of the blackfaced is coarser in quality than that of the Cheviot, but the staple is longer, and it is specially adapted for the manufacture of strong cloths. The higher price paid for Cheviot wool, however, gives it an advantage in this respect. The blackfaced does not make the same progress in fattening as the Cheviot, but the mutton of the former cannot be surpassed for sweetness. That the hardiness of the Cheviot has been impaired is perhaps largely due to the introduction, about thirty-five years ago, of a cross of Leicester blood, which, while it increased the size and appearance of the sheep, weakened their constitution and rendered them unable to withstand the blasts of winter in exposed situations. This falling-off in the popularity of the pure Cheviot is to be regretted, for it has been largely identified with the success of Scottish farming, and taken altogether there is probably no breed so serviceable to the farmers of this country, or that can be better relied upon to pay its way. The wool is fine, close, and short, the fleece generally weighing from 3 lbs. to 5 lbs.; and the carcase is wealthy, varying from 18 lbs. to 26 lbs. per quarter. There has been no attempt made to improve the blackfaced breed out of existence by crossing. Its present high state of development is due to careful and judicious selection, which is every year being more closely attended to, with the result that the improvement is more marked than ever. It would be impossible by any infusion of southron blood to add to the value of the blackfaces for the function they are called upon to fulfil. Their home is on the mountain side, their fare is of the scantiest, and they are exposed to privations under which every other breed would succumb; yet they thrive admirably in their ill-favoured circumstances, and by most hill farmers are regarded as the only safe sheep with which to face a severe winter. The blackfaced is the most picturesque of all the breeds of sheep. His whole appearance betokens a boldness and love of freedom in harmony with the life he leads on his native pastures; and there is an air of defiance about him that well befits the mountaineer. His horns are beautifully curved, and with his shaggy coat impart a wildness not unsuited to his character; while his strong muscular body indicates the natural hardiness of constitution that renders him invaluable to the stock farmer of Scotland. The wool of the blackface is long and coarse, and the fleece weighs about 4 lbs. The average carcase of the sheep when brought to the scales is 60 lbs.; but the best of the rams are retained for breeding purposes, and when sold bring very high prices if drawn from high-class flocks, as much as 71 guineas having been paid for a ram at the Lothian sales. A good cross for fattening purposes is that between the blackfaced ewe and Leicester ram. The produce is chiefly raised at a moderate elevation, and their weight is much greater than the blackfaced, while the quality of their mutton is very little inferior. Some splendid flocks of Border Leicester sheep are kept in the south-eastern district of Scotland, chiefly in Roxburghshire, for the purpose of supplying the demand for breeding rams to cross with Cheviot ewes, so as to provide the necessary stock of half-bred sheep. These Border Leicesters were originally introduced to Scotland from the celebrated stocks of the founder of the breed, Mr Robert Bakewell, Dishley, Leicestershire; but in their new home they have been transformed into a much superior type to the English Leicesters from which they are descended, and for the purpose to which they are applied no better breed could be found. Between two and three thousand of these rams are sold annually at the Edinburgh and Kelso sales, and prices for well-bred animals range as high as £60 and even up to £125, which was paid for a ram in 1883. They take on fat with remarkable rapidity, but their mutton is somewhat coarse, and is not much in demand. Their chief value lies in the adaptability of the rams for crossing purposes; and the half-bred, which is the result of the Border Leicester ram and the Cheviot ewe, is the principal stock on lowland arable farms. It has for nearly forty years been growing in the estimation of farmers as perhaps the most profitable sheep that can be reared, and it is to be found in the extreme north as well as in the Border counties. Another Scottish breed of sheep is the small but hardy type which is peculiar to Orkney and Shetland, and the principal characteristic of which is its soft silky wool. The prices of sheep during season 1884 ranged as follows:—Cheviot wedder lambs, 10s. to 14s. 3d.; Cheviot ewe lambs, 16s. to 17s.; half-bred ewe lambs, 28s. to 29s.; half-bred wedder lambs, 24s.; Cheviot ewes, 29s. 6d. to

31s. ; Cheviot wedders, 46s. ; blackfaced wedders, three years old, 32s. to 41s. ; blackfaced wedders, two years old, 22s. to 26s. ; blackfaced cast ewes, 16s. to 22s.

The breeding of pigs has not received so much attention in Scotland as in England, but the improvement, compared with the general run of farmers' pigs a quarter of a century ago, is very marked, there being an absence of the long-snouted, long-legged, and lanky animal which was formerly too common. Its place has been taken by a better-proportioned and more quickly-maturing type ; but, as we have said, there is room for further improvement before Scottish farmers can reach that high degree of perfection which has been attained by many English breeders. In 1884 there were 159,560 pigs in Scotland, or 3000 more than in the previous year. The four south-western counties contribute 44,500, or nearly one-third of the whole stock. These being the principal dairy counties, the whey from the cheese is largely used in the feeding of pigs, and forms an excellent diet when mixed with Indian meal or some similar substance. About ten years ago the custom which most prevailed in the south-west was to feed the pigs till maturity, then slaughter them on the farm and sell the pork by the carcase to local bacon-curers ; but with the institution of auction marts, and the immense importations of foreign ham, this trade has greatly fallen off, and a more ready and convenient market is found to exist in the public auction sales, where the swine are exposed in a live state and sold as a rule to the pork butcher. Notwithstanding the huge supplies received from Chicago, the piggery is still found a profitable auxiliary to the small farmer of this country, and it might with advantage be further developed.

ENSILAGE.

The term 'ensilage' may be comparatively new in the agricultural world, but the system it denotes belongs to the ancients. The preservation of fodder in pits has long been practised in other countries, but it is only in recent years that it has been brought into practical use in Britain. Introduced into England from America in 1882, it found its way to Scotland in the following year, when several experiments, generally attended with success, were made in the new method of preserving grain and grasses independent of the weather. The Legislature so far recognised the system, that in the Agricultural Holdings Act of 1883 silos were made an improvement for which, having been erected with the landlord's consent, compensation can be claimed at the end of the lease. The latest returns of the Board of Trade show that sixty silos had been erected in Scotland up to June 1884, but since then many more have been opened, there being scarcely a county in which they do not exist. The experiments have almost invariably been made by the landlords, the depressed times and the scarcity of capital preventing tenants from entering on any new field of enterprise that might possibly increase their financial difficulties. The hay crop has always been a precarious one, and with such a fickle climate as that of Scotland anything that would in a manner place the farmer independent of the weather in securing nutritious fodder for his stock during winter would be heartily welcomed ; but successful as ensilage has hitherto proved, so far as subjected to a practical test, it is doubtful if it will ever altogether take the place of root crops, although it may, in a season when turnips are a failure, prove a valuable auxiliary. Cattle, as a rule, take very readily to it ; sheep, particularly lambing ewes, are said to be very partial to it ; and its effect on the milk is also considered beneficial ; but horses do not take to it kindly, and the old, dry, hard, and somewhat coarse rye grass is still regarded as essential to maintaining the bone and muscle in equine stock. The grain crop which it is intended to place in the silo is cut when green and moist, and the grass which usually forms the alternate layers is placed in the receptacle whether wet or dry, so that there is no need to observe the old maxim of 'making hay while the sun shines.' On the silo being filled the contents are covered with planks, and weighted with earth or other material or levers, so as to compress the whole mass as much as possible, a continuous pressure of 150 lbs. to the square foot being desirable, and the place is then closed—being practically hermetically sealed—for four or five months. When the silo has been opened, the 'silage,' as the preserved fodder is called, emits an odour resembling brewers' malt, but the fodder itself is generally found sweet, fresh, and enticing for stock. Ensilage is believed to be specially applicable to Scotland in view of the rigorous winters to which our hill sheep stocks are exposed. Hay at that period of the year, even when a good crop has been secured in the summer, is not often available for the flocks frozen out from their natural food, and the preserved fodder can be conveniently conveyed to them at a cost much less than that entailed by the use of hay or turnips, while a succulent bite is also provided. Experiments have shown that the quality of the milk from dairy stock fed on silage is much richer than that from cows getting roots or hay ; and other practical tests have proved that silage-fed animals take on more flesh than those getting turnips.

DAIRY FARMING.

A too much neglected branch of Scottish farming is that of dairying, which has been left entirely to the south-western counties, where the Ayrshire cattle have their home ; but even in that district there was not for some considerable time great energy shown. Cheese makers, although they might satisfy the Scottish palate, had to produce an article that would meet the English taste and could compete in the London market with the English Cheddar. There is now a good prospect of this being realised, for the improvement in last season's make of Scottish cheese was most pronounced. Dairying in Scotland has, in the midst of these adverse seasons, been found a paying concern, and it may be expected to extend to other districts. A Scottish Dairy Association was formed in 1884, with branches in all the south-western counties ; the Highland and Agricultural Society has instituted a Dairy Department ; and local interest is showing itself fully alive to the importance of this branch of farming. Permanent pastures are recommended for other districts which have grown grain and root crops at a loss, and there is a probability that before long dairy farming will have been recognised elsewhere than in Ayrshire and Galloway. Thirty years ago the cheese manufactured in Scotland was known as Dunlop, and it was generally of an inferior character. The Ayrshire Agricultural Association—which in point of enterprise is hardly second to the Highland Society—took up a question that so materially affected its own district, and sent two of its members to obtain information in England as to the best modes of cheesemaking. A Somerset farmer and his wife were in 1855 introduced to Ayrshire for the purpose of imparting instruction as to the making of Cheddar cheese, and the new mode was adopted with such good results that the English makers have been entirely eclipsed at their own trade. The change in the system of manufacture is estimated to have added 10s. per cwt. to the value of the Scottish cheese, which indicates a rise of over £120,000 per annum in the returns from the dairies of the south-western counties. Dairying has paid well—the profits from this department having been more satisfactory than from any other—and farmers are not disposed to neglect a good thing. Even more remunerative than the manufacture of cheese last year was the sale of milk, which, with good facilities for transport to the large centres of population, yields a very profitable return. Dairy farming has indeed been found to

be the best rent-payer of late, and it is growing in popular favour. A travelling dairy, with the view of improving the character of butter-making, was at work in Ayrshire and Renfrewshire in the autumn of 1884; and an expert in cheese manufacture from Canada gave practical instruction in all the south-western counties during the preceding summer. That dairymen had profited by what he taught was evident at the Kilmarnock Cheese Show held in October last, where the principal prizes were awarded to makers who had followed the Canadian method, one of the chief features of which is that, instead of adding sour whey to bring up the acid, the milk is ripened and a more natural acid produced. The Kilmarnock Cheese Show, held under the auspices of the Ayrshire Agricultural Association, is the largest in the world, the pitch amounting annually to about 500 tons, while buyers attend the fair from the Continent, America, and Australia. Cheese is now regarded more as a substantial article of food for the working classes than a toothsome dainty for the rich, and there is consequently a greater demand for the cheaper kinds imported from America. Notwithstanding this foreign competition, however, prices for good Scottish Cheddar keep well up, ranging in 1884 from 57s. to 70s. per cwt.; Dunlops brought 58s. to 65s.; and Wiltshire, 68s. to 72s.

DRAINING.

Thorough drainage is at the very root of good farming, and to the improved system introduced during the last sixty years is primarily due the present high condition of most of the arable land in Scotland. James Smith of Deanston was foremost in this as in many other matters which aimed at benefiting his brother agriculturists. In 1823, in the parish of Kilmadock, Perthshire, he brought into practice his system of parallel or 'thorough' drainage, which was to change the appearance and character of whole districts throughout the country. Smith's views were that there should be frequent drains at intervals of from 10 to 24 feet; and that the depth should not exceed 30 inches, his sole object being to free that depth of soil from stagnant and injurious water. Josiah Parkes, an eminent authority of his time, differed from Smith in his views of under-drainage. He preferred that the drains should be less frequent, being from 21 to 50 feet apart, and that the minimum depth should be 4 feet. Smith's system was the most popular in the country at the time, on account of its simplicity and cheapness; but the Inclosure Commissioners adopted deep drainage as the rule when disposing of the loans under their control.

Stones were at first used to form the conduits for discharging the water from the drained soil, but soon afterwards machines were devised for making tiles and pipes of clay, the first of these, the invention of the Marquis of Tweeddale, being exhibited at the Highland Society's Perth Show in 1836. Other machines quickly followed, and the cost of making the tiles being much reduced, a great stimulus was given to thorough underground drainage, the merits of which were at once recognised as interfering less than surface draining with the nutritive ingredients of the soil. So extensively has it been carried out that the old plan of forming the surface soil into ridges, with open cross-cuts in the hollows to carry off the water, has been almost entirely abandoned, and the land is now laid as flat as possible, which conduces greatly to tillage operations and the working of the reaper during harvest. The Drainage Act of 1846, authorising loans from the public funds to promote the improvement of land by works of drainage, was more largely taken advantage of by proprietors and tenants in Scotland than in either England or Ireland, and the country has benefited in a corresponding degree. With the introduction of tile pipes the old stone drains fell into desuetude, and the new system largely promoted the draining of land for turnip cultivation. The horse-shoe was the first form of tile pipe, but that has been superseded by the cylindrical pipe, of about 2 inches diameter, which takes up little room, is strong and light, and forms an efficient channel for the water. If the work is well done, the pipes should last for about fifty years.

No great practical success has been achieved in the way of draining by machinery. On favoured soils the mole-draining plough might perform good work at a moderate depth. Its mode of working is to leave an open channel in its progress through the soil, and the water is carried from that channel to the main drains. Messrs Fowler introduced a draining plough which was able to make a complete pipe-drain at a single operation, the pipes being strung on a rope and drawn through the soil behind the mole fixed on the point of the coulter. It could be worked to a depth of 3½ feet in suitable soils, and when shown at the Royal Society's Show at Lincoln in 1854 it seemed to give satisfaction; but it could not be practised to any great extent in this country. The most ingenious of the various draining machines was the invention of Messrs Robson & Herdman, which was exhibited at the Derby Show of the Royal Agricultural Society of England in 1881. By means of this implement the drain was excavated by a series of revolving buckets cutting to the required depth and fall, the drain pipes being laid and the soil returned to its position by shoots. The machine was driven by a wire-rope, like a steam plough or cultivator, the whole process being accomplished automatically. The price, however, was so high—being nearly £400—as to be practically prohibitive, and no more simple or less expensive draining machine has since been brought out.

FARM MACHINERY.

The agricultural engineer has done more than keep pace with the advance in agriculture. He has anticipated the wants of the farmer, and has provided him with a complete set of farm machinery, equipped with which he is placed in a much more advantageous position for prosecuting his business than were the farmers of the preceding generation. Mechanical ingenuity has shown itself prominently in every branch of the farmer's industry, and something like a revolution has been effected in the methods and appliances of husbandry. Steam and machinery have largely taken the place of manual labour; self-delivery reapers and binders have ousted the primitive sickle from the field; the thrashing machine has been substituted for the slow and laborious flail; and the work of harvesting has in consequence been lightened and cheapened, while the period necessary to secure the crops has been much shortened.

The most essential implement of tillage is the plough, which plays such an important part in the cultivation of the soil, the thorough stirring of the land being necessary to secure a proper 'tilth' and destroy vegetable and animal pests. The swing-plough has met with general acceptance throughout Scotland, and it is the one in use on most farms. Its utility has been thoroughly tried, and it has been found to answer best the conditions of Scottish agriculture. Introduced by James Small in 1760, it speedily supplanted the rude and cumbrous Scottish plough, drawn by oxen. It has undergone considerable improvements, but its main features are unaltered. Wheel-ploughs are not popular in the northern part of the kingdom, and they have never made way to any extent on this side of the Tweed. In 1866, Mr Pirie of Kinmundy invented a double-furrow plough set on a frame with three wheels, and it has been attended with considerable success, although the single-

furrow swing-plough, drawn by a pair of horses, still retains the favour of farmers. The importance of stirring the soil to as great a depth as possible led Mr Smith of Deanston to follow up his system of thorough drainage by introducing a subsoil plough, which has since been improved so as to lessen the draught and friction. Drill-ploughs, with double mould-boards, are used for laying up the furrows of green crops, this implement having been brought into requisition with the system of growing green crops in parallel rows.

The farmers of Scotland, while they have been quick to avail themselves of modern improvements in the appliances for successful husbandry, have not shown any eagerness for the application of steam to the cultivation of the soil, and accordingly horse-power is still the recognised means of draught, except in one or two localities where special circumstances favour the working of the steam-plough. Although first introduced to Scotland nearly half a century ago, the steam-plough has not made much progress, there being probably not more than fifty sets of the tackle in the country. This may be partly due to the elaborate and costly apparatus necessary, but it is also owing in great measure to the satisfaction given by the swing-plough as a means of cultivation. Where deep ploughing is desirable, there can be no question as to the advantages possessed by the steam cultivator, but for its successful working, large square fields, with a comparatively flat surface and an absence of stones and boulders, are almost essential, and these conditions are not always obtainable without a deal of extra labour, for which the celerity of the steam-plough would hardly compensate. The steam-plough was first brought under the notice of Scottish agriculturists by the eighth Marquis of Tweeddale; and encouraged by the success attending the application of steam-power to thrashing and other operations of the farm, the Highland and Agricultural Society, in 1837, offered a premium of £500 for the successful cultivation of the soil by steam, the operations to be judged of in relation to the cost of animal power. Although the premium was continued till 1843, no one competed for it, and it was then withdrawn. A practical demonstration of the working of the steam-plough—although attended with unfortunate results—was, however, given for the first time in Scotland in 1837, when an implement brought out by Mr Heathcote, M.P., and which had been seen at work in Lancashire, was tried on Lochar Moss, near Dumfries, in connection with the Highland and Agricultural Society's Show. The plough was in operation for three days, and seemed to work with a fair degree of success, but during the following evening it disappeared in the moss, where it still lies buried. Nothing daunted by this untoward circumstance, the National Agricultural Society, urged on principally by the then Marquis of Tweeddale, continued its efforts for steam cultivation, and they were ultimately to some extent successful. Experiments were carried on by the Marquis on his home farm at Yester, but on his Lordship's appointment to the Governorship of Madras they were abandoned, just when the result promised to be satisfactory. The Highland and Agricultural Society renewed its offer of a premium, and in 1852 Mr James Usher, Edinburgh, was awarded a sum of money for an invention, the principal features of which were two large cylinders, the first carrying a locomotive engine, and the other bearing a series of ploughs arranged in spiral form, which turned over the soil as the engine advanced. This, however, did not meet the requirements of agriculturists, and it was not till 1857, when Mr John Fowler of Leeds brought forward his steam tillage apparatus, that anything approaching a satisfactory solution of the difficulty of applying steam to the cultivation of the soil was arrived at. Mr Fowler was at the time awarded a premium of £200 by the Highland Society. Several sets of steam-ploughs were afterwards brought into practical use in Scotland, companies being formed in some districts for the purpose of buying the machinery and hiring it out to individual farmers, but the system has not been extensively adopted. In most of the north-eastern counties cultivation by steam-power is more or less carried on, but there are several obstacles yet to be overcome before the steam-plough will rank as an ordinary implement of the farm. It was, however, along with other specially constructed machinery, successfully used at Lairg and Kildonan in Sutherland in the reclamation of large tracts of waste land, a purpose for which it seems admirably suited; and it may yet be got to perform good work on the heavy clay soils which are so difficult of cultivation.

Grubbers, harrows, and scarifiers have all been improved in keeping with the advance of agriculture, and have been brought into harmony with other modern implements of tillage, while the old wooden field-roller has been reformed out of existence, and its place taken by implements of easy draught and superior design. The latest improvement is the cylindrical roller, filled with sand or water, which seems to serve its purpose better than any previously introduced. Broadcast and drill sowing-machines have likewise been the objects of the engineer's attention, and at seed-time effect a considerable saving of time and money, while the seed is deposited in its bed with a regularity and evenness that were not obtained under former methods of sowing. The uncertainty of the seasons apart, the farmer now approaches the period of harvest with a greater degree of confidence, begot of the knowledge that he has done all in his power, by improved methods of tillage and cultivation, to deserve, if he cannot command, a good yield of the fruits of the earth.

In no other implement of the farm, perhaps, has there been so much improvement within the last twenty years as in the reaping-machine, the familiar click of which is now to be heard on every holding. Almost every year has seen some alteration for the better in its details, and it has now been brought as near perfection as it seems possible to imagine. In 1805, a millwright at Castle-Douglas obtained a premium from the Highland and Agricultural Society for a reaping-machine, which also delivered the grain in small sheaves; and in 1811, Alexander Kerr, Edinburgh, and James Smith of Deanston, each produced a new reaper, having large circular rotating cutting frames. Although reported upon favourably at the time, none of these machines had a permanent success. The first reaping-machine of real practical value was invented by the Rev. Patrick Bell of Carmyllie, Forfarshire, in 1827, who then received a premium of £50 from the Highland and Agricultural Society, and who forty years afterwards was presented with £1000 by the agriculturists of Scotland, in recognition of his eminent services in producing an implement which had done so much to lighten the labours of the harvester. Most of the improvements in the reaper have, however, been effected by English and American engineers, and it was to the reaping-machines shown by American makers at the Great International Exhibition of 1851, that we owe the recognition of this implement as one of the chief mechanical forces of the farm. From the somewhat crude implement arranged by Mr Bell to the manual-delivery reaper of thirty years ago was a decided step in advance, and from the latter have been developed the elegant self-delivery machines, of which so many are now manufactured by the principal implement-makers in the country, and the still more serviceable combined reaper and binder, which, however, has not yet been brought into such general requisition in Scotland. Its efficacy has been thoroughly demonstrated at public trials, and the only drawback to its more extensive use is its price, £60 for a single implement being a serious consideration for farmers in these times of depression. The success of the machine is, however, ensured, and with better times it may be expected to occupy a place on all large arable farms where time is of the greatest value during harvest. The self-binding reaper is indeed the most complete machine that has yet been placed at the service of the farmer, and it aims at accomplishing a greater amount of work than any other. It is of easy draught for a pair of horses, and requires only one man in attendance, whilst

the grain is regularly delivered in compact sheaves, securely tied with string, and of a uniform size, where the crop does not vary much in bulk; so that it is generally admitted that its sheafing and binding are much superior to the same work done by hand labour.

Steam has of late years proved a valuable auxiliary to the thrashing-machine. The first thrashing-machine of which record is made in Scotland was constructed in 1740 by Mr Menzies, advocate, and it was driven by a water-wheel. It was only an elaboration of the flail principle, and its inefficiency was soon demonstrated. Other inventions at this time proved equally unsatisfactory; but in 1787, Andrew Meikle, Houston Mill, East Lothian, succeeded in solving the problem of how best to separate the grain from the straw by machinery, and the principle of his cylindrical machine is that which has since been acted upon. Meikle's thrashing-machines soon became popular in Scotland, and the inventor was, in 1810, awarded a premium of thirty guineas by the Highland and Agricultural Society. An interesting fact is that in Meikle's own county of Haddington, between 300 and 400 of his thrashing-mills were erected within twenty years from the date of the patent, the estimated expenditure being £40,000, which speaks highly for the enterprise of the farmers of that period. On a well-equipped farm a fixed engine drives the thrashing-mill and a full set of food-preparing machinery; but a good business is done by portable thrashing-machines, driven by traction engines, which travel from place to place, and perform their work in the field or stackyard. They have indeed become so important a feature of rural husbandry, that an Act of Parliament regulates the movements of such road locomotives on the public highway. Winnowing and dressing machines are closely allied to the thrashing-mill, and they have been perfected in a corresponding degree; the splendid fanners of the present day working with all the smoothness that mechanical skill can secure, and dressing the grain with an expedition and efficiency that could not be obtained a quarter of a century ago; although the leading principle of the fanners first introduced into Scotland in the latter part of the eighteenth century—by James Meikle, father of the inventor of the thrashing-mill—has been retained. The securing of the hay crop, with such a variable climate as that of Scotland, is a work of great importance, and is attended with considerable risk. That work has, however, been greatly facilitated since the introduction of hay-making machines, which have largely taken the place of the simple fork for turning the hay in the field, and on which some improvements continue to be made. The horse-rake is also a great labour-saving appliance during harvest, and is now in common use on all but very small farms.

The inventions of the agricultural engineer have been by no means confined to harvesting machinery. In every department of the farm is to be seen ample evidence of his activity, and the resources of his fertile brain seem anything but exhausted. Potato-planters, though not yet in general use, promise to play an important part in the cultivation of that valuable tuber. The machines are exceedingly simple in construction, and require no mechanical skill in working. They are made for single or double rows; the potato setts are placed in a hopper, from which they are carried by a chain of cups, and deposited at regular intervals in the furrow. Then the potato-digger, another implement of recent invention, comes to the farmer's assistance in raising his crop. Both are implements which effect an immense saving in manual labour, while the work is done much more quickly. Drill sowing has long been in use in this country, both for depositing the seed and artificial manures; but it is only of late years that the turnip-thinning machine has been brought forward. It has not, however, yet established itself in the confidence of most farmers, the majority of whom still cling to the old hand-hoe. In some districts of the country, where circumstances permit, the hoeing of turnips is accomplished by gangs of boys, hired from Reformatories or Industrial Schools, at from 6d. to 9d. each per day. These boys, discarding all implements, go to work with their hands, and get through it much more rapidly than workers with the hoe, while the thinning is more regularly performed, and there is less damage to healthy plants. The turnip topping and tailing machine is another of the set of implements that were designed to facilitate the raising of the root crops, but its success has only been partial as yet, though it embraces features in its construction that seem to render it worthy of more general adoption for the work which it aims at accomplishing. Turnip-cutters on the most approved principle, by which the roots are at once cut into convenient sizes for the different classes of stock; chaff-cutters, which embody many improvements on the old implement; new corn-crushers, grist-mills, and pulping machines,—these are only a few examples of what has been done in the way of providing the stock-breeder with appliances that lighten his labour, economise his time, and produce better results in the feeding of his animals. As showing the great strides that have been made in the manufacture of agricultural implements, and the increased attention that is paid to that industry, it may be mentioned that fifty years ago only nine implements were shown at the Highland and Agricultural Society's Show, while at the Centenary Exhibition of the Society, held in Edinburgh in 1884, the implements forward numbered 2300.

WOOL.

While suffering in common with arable farmers from the agricultural depression, the flockmaster has not been so seriously affected by the low rates current for farm produce. His calculations on taking his farm have, however, been much upset by the great reduction that has of late years taken place in the price of wool, a fall that has not been compensated for by the increased value of mutton as compared with what it was twenty years ago. An explanation of the present low rates for wool is to be found in the enormous and increasing quantities of cross-bred wools now imported from Australia and New Zealand. They are of all qualities, and are largely used in the manufacture of various classes of goods for which our home wools were at one time alone considered suitable. As showing the magnitude and rate of increase in these imports, it may be stated that the weight of wool from Australasia, which in 1860 amounted to 59,000,000 lbs., had risen in 1870 to 175,000,000 lbs., to 300,000,000 in 1880, and to nearly 400,000,000 in 1884. The estimated quantity of wool grown in Scotland in 1884 was about 34,500,000 lbs. The average value of Scotch wool for twenty years previous to 1883 (although the present low range dates from the period of the Bank failures in 1878) may be stated roughly as at double the prices now obtainable. Smearing of sheep, for the prevention of scab, was for long the prevailing practice on Highland farms, but as it reduced the value of the wool, it is being gradually abandoned, and is now only continued on a small scale on very few farms. Its function is effectively performed by the non-poisonous sheep dips, which have made great headway among hill farmers of late years; and as a result, the fine north country clips are now, for the most part, sent to market as white wool. A considerable quantity of blackfaced wool has in recent years been sent to America for the carpet trade. The following may be taken as the current quotations for washed wool per lb. :—Half-bred hoggs, 9½d. to 11½d.; ewes, 8½d. to 9½d.; Cheviot hoggs, 10d. to 12d.; ewes, 9d. to 10½d.; unwashed black-faced, 5½d.

AGRICULTURAL LEGISLATION.

It cannot be said that agriculturists as a class have received too much attention at the hands of the Legislature. Prior to the extension of the Franchise, tenant-farmers formed the bulk of the electorate, yet no industry was so meagrely represented as theirs. They were rather averse to proclaiming their grievances and supplicating Parliament to interfere in their behalf, but a long period of adverse seasons, together with the losses entailed by the one-sided contracts into which they had entered, compelled them to make their case known. That there was depression in its acutest form was too patent to admit of question, and the Beaconsfield Government in 1879 required little persuasion to appoint a Royal Commission to inquire into the condition of agriculture in the country. Following on their report, Mr Gladstone's Government, in 1883, passed the Agricultural Holdings Act, which for the first time secured to tenants compensation for their unexhausted improvements, while power was also given to the tenant to bequeath his lease. One great drawback in the measure is that compensation is only given to a 'quitting' tenant, so that a man must leave his holding before he can receive any pecuniary consideration for his improvements; and there is no provision to prevent his rent being raised on his own improvements. Farmers are far from satisfied with the Act, and those who belong to the Farmers' Alliance are heading an agitation in which they clamour for nothing short of the 'three F's'—fair rents, fixity of tenure, and free sale of produce. The same body also urge the establishment of a Land Court for Scotland, with powers similar to those possessed under the Irish Land Act, and the abolition of the lease system, substituting therefor a two years' notice. Their programme is so far advanced as to include, in addition to the objects already mentioned, the total abolition of the Game Laws, the restriction of deer forests, the abolition of the Law of Entail and Primogeniture, and a revaluation of farms. Among other recent legislation affecting agriculture was the abolition of Hypothec in 1879, but the Act of Sederunt was left, and it has proved exceedingly irksome. The Ground Game Act of 1880 was supposed to be a liberal concession to farmers, whose crops had been eaten up by hares and rabbits which they dared not destroy, but the interpretation which the Law Courts have put on its terms has rendered it almost nugatory, the powers of the tenant to snare being confined to the rabbit-hole, where it is practically impossible to set traps. The Malt Tax was abolished by Mr Gladstone, but the imposition of a Beer Duty in its stead left the incidence of the tax very much as it was, and little satisfaction was expressed at the change. The Cattle Diseases Act of 1884 was a much-needed measure, yielded by the Government most reluctantly, and only after numerous deputations of agriculturists had waited upon them to point out the disastrous effects that were following upon the policy of allowing live animals to land in Britain from countries where contagious diseases existed.

THE HIGHLAND CROFTERS.

No account of the agriculture of Scotland would be complete without some reference to the peculiar condition of the smaller tenants of the Highlands and Islands. The system of agriculture pursued by the crofters, or the smaller tenants, is of the most wretched description. In many districts, particularly in the Long Island of the Outer Hebrides, the plough is unknown, and the people turn over their half-exhausted soil with a peculiar wooden instrument which goes by the name of the *Cos Chrom*. What may be termed the higher agriculture of the Highlands, as distinguished from that pursued by the mass of the people, or the crofters, has undergone various changes since the Rebellion of the '45. Prior to that period the Chiefs let out the land to 'tacksmen'—frequently men of gentle blood, cadets of the Chief's family—who in turn sub-let it to the common people. But after the Rebellion, when feudal power and homage were swept away, the tacksmen were deprived of this privilege, the proprietor finding that, if the people held directly under himself, he could obtain more rent, more security, and more authority as a landlord. This led to discontent on the part of the tacksmen, a number of whom, on Lord Macdonald's estates, bound themselves not to offer for any farm that might become vacant. This combination failed, and the new system gradually extended; but it only led up to another and a most important change.

The Chiefs began to be sorely tried by their new tenants, who became so numerous that estate regulation, as well as collection of rent, became matters of difficulty. 'The men of Kintail,' says one writer, 'held a large tract of land in Glengarry as a summer *shieling*, or grazing for their cattle, for which they paid only £15 of annual rent. The ground was examined by a sagacious sheep-farmer from the dales in the south. He offered no less than £350 of rent—about half the value of the whole estate—and, having obtained possession, stocked it with Cheviot sheep, and died a richer man than his laird.' It was impossible for proprietors to resist temptations like this. The patriarchal system was forgotten; the stranger was preferred. In the course of time in several Highland counties great sheep farms were formed, the people having been removed nearer to the sea-coast, where they might unite fishing with agriculture. Many emigrated. A new system—that of extensive sheep-runs occupied by men of skill and capital—was introduced. Sheep-farming extended, roads were made, a higher class of tenants was in course of time obtained, and the large farms were so managed as to yield, during many years, high profits and corresponding augmentation of the rent-rolls.

The chronic state of the crofter population during the past generation has been one necessarily of poverty and discontent. They complain that through past evictions—evictions to make room, in the first place, for the large sheep-farmers, and, latterly, to make room for deer—they are confined within narrow limits of inferior and exhausted soil. Their contention was that they were always subject to arbitrary increase of rents, to arbitrary removal without compensation for improvements, and to harassing estate regulations. A crisis was brought about by the great land agitation, which has troubled the Highlands and Islands during the past ten years. It broke out in Valtos, a wild and distant township in the north of Skye, where, on the alleged ground of arbitrary and unjust augmentation of rent, the people refused to pay any rent at all, and stoned the officers who came among them to serve the Queen's writs. From Valtos it spread throughout the whole of the Islands, and to the Clyth estate in Caithness-shire, to many districts of Sutherlandshire, and to the west of Ross. The flame kindled in Skye has spread throughout every crofter district in the Highlands and Islands.

A riot at the Braes of Portree, when a force of seventy policemen arrested a number of crofters guilty of having deforced a sheriff-officer; a similar riot in Glendale; the despatch of H.M. gunboat *Jackal*, with a special Government Commissioner on board to remonstrate with crofters guilty of a breach of interdict pronounced by the Court of Session against putting their stock on hill grazings that did not belong to them; a spirit of turbulence generally throughout Skye and the Lews; and the legal proceedings taken by an extensive holder of deer forests for the eviction of a whole township of cottars from the estate of Kintail,—roused the feeling of the country, attracted the attention of Parliament and led the Government, in March 1883, to take the important

step of appointing a Royal Commission to inquire into the condition of the crofters and cottars of the Highlands and Islands of Scotland. The Commission, over which Lord Napier and Ettrick presided, found that the crofter population suffered from undue contraction of the area of holdings, undue extension of the area of holdings, insecurity of tenure, want of compensation for improvements, high rents, defective communications, and withdrawal of the soil in connection with the purposes of sport. Defects in education and in the machinery of justice, and want of facilities for emigration, also contributed to depress the condition of the people; while the fishing population, who were identified with the farming class, were in want of harbours and piers, boats and tackle for deep-sea fishing, and access to the great markets of consumption. At the Martinmas of 1884 a 'no rent' policy was adopted throughout the greater part of Skye, the Lews, and more notably in the Long Island, where the tenants of one very extensive proprietor absolutely refused to pay any rent whatever—not alleging poverty, but stating that they would withhold rent until the land was fairly divided among them. Accordingly, attempts to serve summonses of removal in the Lews and in Skye were defeated by the mobbing and deforcement of the officers. It became necessary to send a military expedition, with four ships of war and 500 marines to Skye in November 1884. This display of force preserved order; and the marines were subsequently used to support the police in apprehending crofters in Skye and the Lews, accused of acts of deforcement.

VII. ZOOLOGY.

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SCOTLAND belongs to that great zoological region known as the Palæarctic, which, extending from Ireland to Japan, comprehends all the temperate regions of the Eastern Hemisphere. Over this vast area the fauna, while exhibiting much specific diversity, shows such a generic similarity as sufficiently marks it off from the other zoological regions of the globe. Still greater similarity prevails in the fauna of each of the Palæarctic sub-regions, so that few of the animals found in any one of the countries contained in a sub-region are peculiar to it. The Scottish, or what is very much the same thing, the British fauna, is found to be practically identical with that of the neighbouring continent, inasmuch as it possesses exceedingly few species that are not found there. It differs, however, from that of the continental area of the European sub-region in the absence of many specific forms. The comparative poverty of Britain in species, and the similarity of such as are with those of the Continent, can be most readily explained by a reference to the recent geological history of our island. Its existence as an island is comparatively recent. Prior to the glacial period it formed part of the European mainland, and its fauna then was similar to, and as rich in species as, that of contiguous France and Germany. During the latter part of the glacial period there is evidence that Britain sank until only its highest peaks remained above water—a submergence which must have extinguished most of its fauna. It rose again from the waters as the glacial period passed away, until once more it became part of the Continent. The animals of the latter then migrated into Britain and gave origin to its existing fauna. How long this latest connection of Britain with the mainland lasted is not known. It did not endure long enough, however, to allow of the migration of all the species of continental animals into the new area. The similarity of the British and European faunas is thus regarded by such competent authorities as Mr A. R. Wallace to be due to the existence at one time of a land connection between the two, while the absence of so many Continental species from the British fauna is attributed to the removal of this land-bridge before all the animal migrants had time to cross. This poverty is most marked in the case of mammals and reptiles; these, with the exception of the bats, not possessing the power of flight. Thus while Germany has about 90 species of land mammals, and Scandinavia 60, Britain has only 40. The latter also has only 13 species of reptiles and amphibia, while the nearest continental land has 22. Each of these British species occurs also on the Continent, and it is the opinion of competent authorities that our island does not contain even a single variety of mammal, reptile, or amphibian that is peculiar to it. It is somewhat remarkable that it is among birds, fish, and insects—creatures to whose migration the narrow sea separating Britain from the Continent might be supposed to form no effectual barrier—that species and varieties peculiar to Britain occur. It is difficult to deal with the fauna of Scotland as distinct from that of the rest of the island. There are many species, however, especially among the invertebrata, which are exceedingly local in their distribution, and which, occurring in England or Scotland, have not yet been found in both. There are some also which, occurring abundantly in the one division of the island, are found but rarely in the other; nor is this surprising in view of the very considerable physical differences between the two—the mountainous character, for example, of the one, and the level nature of the other. There are others, again, which have obtained a place in the British fauna through an occurrence so rare in any part of the island as to justify their classification as 'accidental visitors.' Attention will be specially directed in the

following account to such species as are either peculiar to or have their British headquarters in Scotland.

MAMMALIA.—In a country so thickly peopled as the United Kingdom it is impossible for the larger mammals to continue to exist in a wild state unless protected by man. The wolf and the bear have thus been exterminated in Britain during the historic period, and the various species of deer, the fox, and probably also the hare, would have shared the same fate had they not been protected by game-laws and otherwise. It is the smaller mammals—rats, mice, and rabbits, for example—that are best able to hold their own against civilised man. Seventy-three species of mammals have been found in the British Isles and their surrounding waters; many of these, however, must be regarded as accidental visitors, having only been observed on one or two occasions. Of the 14 species of British bats only 3 are known to be Scottish—namely, the Common Bat (*Scotophilus pipistrellus*), Daubenton's Bat (*Vespertilio Daubentonii*), and the Long-eared Bat (*Plecotus auritus*). The milder climate and more abundant insect life of England as compared with Scotland render the former country more favourable to bat life; but the disparity in the number of species found in the two countries is probably due in some measure to the fact that the *Cheiroptera* have not been so thoroughly studied in Scotland. Of the 5 species of British *Insectivora* 4 occur in Scotland—viz., the hedgehog, mole, common shrew, and water-shrew. The hedgehog is not found in the north of Scotland nor in the islands, while the mole is also absent from the north of Scotland and from the Orkney and Shetland Islands. The latter is one of the farmers' foes, doing great injury by its subterranean burrows to growing crops; it has consequently been the object of the most untiring persecution. There is no evidence, however, that the agriculturist is doing more than keeping the numbers of the mole in check. There are 15 species of British *Carnivora*, 13 of which are Scottish. The badger, as might be expected from its comparatively large size, is becoming a rare animal in Scotland. The otter is also decreasing in numbers, although its aquatic habits give it a greater chance of survival. In the north of Scotland and in the Shetland Islands it is said to frequent the sea, and to proceed a considerable distance from the shore. The common weasel, the ermine, polecat, common and pine martens, are all found in considerable numbers in Scotland. The ermine in the Highlands assumes in winter the pure white fur—always excepting the tip of the tail—which in lowland districts it only partially acquires. The pine marten is the common species in Scotland, as the common marten is in England. The wild cat, which is quite a distinct species from the domestic form, is now found in greatest abundance in the Highlands of Scotland, especially in the counties of Inverness, Ross, and Sutherland. They are frequently caught in rabbit-traps, to which and to gamekeepers they are fast falling a prey. The fox survives in Scotland owing chiefly to the protection afforded it in the interests of sport. Of marine *Carnivora* the two Scottish species are the common seal and the grey seal, neither of which occurs in such abundance as to render its pursuit an object of commerce. The common seal is very abundant among the Scottish isles, especially in the Orkneys and Shetlands, and great numbers of them are annually killed. They frequent shores and estuaries, and the salmon and sea trout possess no greater enemies than these voracious creatures. Of the 13 British species of *Rodentia* 12 are common to Scotland. The squirrel, according to Mr Harvie-Brown, had become almost extinct in Scotland owing to curtailment of forest ground. In comparatively recent years it has again spread from England northward, until now it is probably as widespread and as injurious to forest trees as at any former period. The black rat is interesting as being the indigenous British species. It is still found in a few localities in Scotland, but is fast dying out before the brown rat. The latter species is believed to have been introduced into this country from the East so late as the middle of the eighteenth century. Now it is as widespread as man himself, and wherever it goes it drives out the black rat. The hare probably owes its survival in the midst of a dense and civilised population to the protection of English game-laws. The rabbit has also benefited somewhat by the same, but it is doubtful whether, having regard to its burrowing habits and its extraordinary prolificness, it could be exterminated did we wish. The Australian and New Zealand colonists, at all events, have failed to destroy it after the most strenuous efforts. The rabbit is not indigenous to Britain, it having been introduced at an early period from the south of Europe. An interesting species is the mountain hare, which in Britain only occurs in Scotland. As found in the Highlands, it is of a fulvous grey colour in summer, but becomes perfectly white in winter. It has of late years been introduced into the Lowlands, and there it has been observed that the change to white in winter is only partial. There are 4 species of British *Ruminantia*, all of which occur in Scotland. The white cattle of Cadzow Forest are regarded by some naturalists as the unsubdued descendants of the ancient *Urus;* by others merely as an ancient fancy breed of domesticated cattle preserved for their beauty in the parks of the nobility. That the *Urus* abounded at one time in Britain is proved by the numerous remains of it that have been fouud especially in Scotland, and Professor Rutimeyer regards the semi-wild form of Cadzow Forest

as making the nearest approach of all the breeds of oxen to the true *Urus* type. True, it is much smaller, but this may be accounted for by less favourable conditions of existence and too close interbreeding. They are of a pure white colour with the exception of the muzzle, the tips of the horns, the ears, and the hoofs, which are black. This uniformity of colour, however, is only obtained by the destruction of all the calves that deviate from it. Scotland is *par excellence* the home of the British deer. The fallow deer is no doubt more common in England, but it is a semi-domesticated species, and is not a native of Britain. It came originally from Southern Europe, and is supposed to have been introduced into England by the Romans. The roe-deer was in Pennant's time restricted to the highlands of Scotland north of Perthshire. It has since, owing to the increase of plantations, extended its range through the south of Scotland and north of England. The red deer is likewise confined chiefly to the Scottish Highlands, where large tracts of land have been turned into deer forests. It is not now found in the Orkney and Shetland Islands, although the numerous antlers dug out of their bogs show that it formerly abounded there. The antlers preserved in ancient Scottish castles, and still more those found buried in mosses and submerged forests, show that in early times the stag attained a greater size and developed heavier and more branching antlers than it does now. This degeneration is probably due to the restriction of its feeding grounds, to the barren mountainous character of much of the deer-forest land, and to excessive interbreeding. To the latter cause also is attributed the frequent occurrence of mal-formed horns. Of the remaining order of Mammalia—the Cetacea, or whales and dolphins—no fewer than 22 species are chronicled as having been found in British waters, 16 of these being Scottish. Many of them, however, are the merest stragglers driven on our shores by stress of weather or by sickness. A Hump-backed Whale (*Megaptera longimana*)—the first recorded Scottish example—was taken off the mouth of the Tay in 1883. The Rorqual occurs not unfrequently off the Orkney and Shetland Islands, and occasionally on the Scottish coast. Less frequently occur Sibbald's Rorqual, the Lesser Rorqual, the sperm whale, Cuvier's and Sowerby's whales, and the Narwhal. The pilot whale, the porpoise, the dolphin, the grampus, and the bottlenose whale are the cetaceans which occur in greatest abundance on the Scottish coast. Several of these occur in schools, and when noticed they are chased and captured in large numbers by the fishermen. The value of the blubber thus obtained, however, is trifling compared with the damage done by these cetaceans to the fisheries. Whales of various species may thus be seen encircling herring shoals and eating their way into the compact mass. Cromarty Bay has been seen alive for days with the spouting of hundreds of large-sized whales.

Aves.—The birds of the British Isles are, with a single exception, all found on the Continent of Europe. The one exclusively British species is the Red Grouse (*Lagopus Scoticus*), found in greatest abundance on Scottish moors. The Willow Grouse (*Lagopus albus*) of Northern Europe, its nearest continental ally, differs from it chiefly in assuming white plumage in winter. It is not improbable, as Professor Newton suggests, that at a time, geologically speaking, not very remote, these two species of grouse had a common ancestor, and that the severe winters to which the willow grouse has since been subjected, has led to its assumption of a snow-white garb in winter. Some ornithologists regard the British Cole Tit (*Parus britannica*) as distinct from the continental form, from which it can be readily distinguished by its darker colour. Gradations of shade connecting the two forms have, however, been obtained,—thus proving that the British is but an insular variety of the continental form. Probably the same thing may be said of the wren brought from St Kilda by Mr C. Dixon in 1884, which has since been described and figured by Seebohm (*Ibis*, 1885) as a new species—*Troglodytes hirtensis*. A skilled ornithologist can usually tell by looking at the skin of a European bird whether it is a British or continental specimen, the plumage in the former case being, as a rule, darker and duller than in the latter. This curious difference is, no doubt, connected in some mysterious way with our insular climate. The study of British ornithology has long been zealously pursued with the result that more is known regarding the haunts and habits of our birds than of any other group of 'home' animals. The list of British birds contains altogether about 382 species; 160 of these, however, can only be regarded as accidental visitors, many of them having only been observed on one or two occasions in Britain. Of these wanderers, Mr Seebohm calculates that 97 of the species have visited us from Europe, 45 from America, and 18 from Asia. The remaining 222 species are resident in Britain, but not more than a half of these remain with us all the year round. Many species are merely winter visitors, which, having their summer haunts and breeding quarters in Arctic regions, migrate southward in the autumn and fly homeward again in spring. Some, like the swallows, are summer visitants, which, after rearing their brood in Britain, retire towards the equator on the approach of winter. Others again are merely 'birds of passage,' which twice a-year—in spring and autumn—may be observed passing across our land, but not residing in it. The number of species of birds that have been noticed in Scotland, whether resident,

birds of passage, or stragglers, is about 310. Mr Gray, in his admirable work on the *Birds of the West of Scotland*, enumerates 302 species, and since the publication of that work in 1871 several species have been added. These include the stock dove, dusky shearwater, Pallas's shrike, squacco heron, and desert chat.

The greatest difficulty has been experienced by naturalists in devising a natural classification of birds, so far, at least, as the Orders are concerned; and the variety of systems at present seeking the acceptance of zoologists shows that the difficulty is not yet surmounted. In the absence of any generally adopted natural system, it will be most convenient to arrange the Scottish birds under the well-known, if somewhat artificial, Orders originally proposed by Kirby. These are—

Raptores, or birds of prey,	31	Scottish species.
Insessores, or perchers,	103	,,
Scansores, or climbers,	4	,,
Rasores, or scratchers,	15	,,
Grallatores, or waders,	65	,,
Natatores, or swimmers,	88	,,

Of Scottish 'birds of prey' there are 31 species, 9 of these being owls. They are the enemies of 'game,' and as such have been subjected to the most relentless persecution at the hands of game-keepers. The result is, that almost all our birds of prey are becoming scarcer, while most of the larger species are fast approaching extinction in Britain. The eyries of the golden eagle are now for the most part confined to the Outer Hebrides and to the northern counties of Scotland. Of late years, however, owing to the general outcry against the extirpation of this noble bird, it has been taken to some extent under the protection of Highland lairds, and seems to be again on the increase in Scotland. The white-tailed eagle, which, a few years ago, was much commoner than the golden eagle, is now probably the rarer form. The goshawk, osprey, and kite, all formerly common in Scotland, are now exceedingly rare, although smaller species, as the sparrow-hawk, kestrel, and peregrine, seem to be holding their ground. The owls, of which the commonest Scottish species are the barn owl, the tawny owl, and the short-eared owl, are less liable to attack than their day-flying neighbours, owing to their nocturnal habits. They are also useful as vermin killers, mice and 'such small deer' forming their favourite food. Two of the largest of known owls occur in Scotland—viz., the eagle owl and the snowy owl, both of which are found occasionally in the Orkney and Shetland Islands, the former being a rare, and the latter a regular, visitant. The snowy owl is also a regular visitant to the Outer Hebrides, but there is reason to believe that specimens taken on the west side of Scotland are migrants from Canada, while such as are found on the east side have probably crossed from Scandinavia, where the snowy owl is known to breed. The *Insessores* are the typical birds, and include the thrushes, warblers, tits, crows, shrikes, starlings, finches, swallows, wagtails, and larks. They are almost all small birds, the largest being the raven. The raven is fast ceasing to be an English bird, but is still fairly common in the Highlands and Islands of Scotland. The chough, another member of the crow family, was once common on many parts of the mainland of Scotland, but is now confined to the western isles, where it builds its nest on precipitous cliffs. The jackdaw, on the other hand, is said to be increasing. The same may also be said of the starling. Thirty years ago, according to Mr Gray, it was comparatively a scarce bird throughout the mainland of Scotland; now it is found, like the sparrow, abundant in the neighbourhood of every town. One of the most interesting of the irregular visitors to Scotland belonging to this Order is the Bohemian waxwing. Not a season passes without its occurrence being noted; but, occasionally, it appears in extraordinary numbers, as it did, for example, in the winter of 1866-67. It breeds in Lapland, and its visits to this country in large flocks are supposed to be due to scarcity of food in its usual winter quarters owing to exceptionally heavy falls of snow. Of the *Scansores* there are only 4 Scottish species, none of which are very common. The best known and most generally distributed is the cuckoo—a summer visitant most common in the west of Scotland. The nest of the meadow pipit is the one most commonly chosen by this bird as the receptacle for its eggs. The green and great spotted woodpeckers are both rare in Scotland, although the latter breeds in Banff, Aberdeen, and Inverness. The fourth species is that curious bird the wryneck, which has been known to breed in Scotland—in the district of Nether Lochaber, —but is rare in any part of the country. The *Rasores* include pigeons, grouse, pheasants, and partridges. The rock dove, regarded as the original wild form of all the domesticated varieties of pigeon, is specially abundant on the west coast and islands of Scotland, breeding in vast numbers in the sea-washed caves of that rocky coast. It even occurs so far from the mainland as St Kilda, from which it is said to make daily excursions to the Hebrides for food. The stock dove has only been noticed of late years in Scotland, but as it was found breeding in Berwickshire in 1878, it will probably become more widely spread. The capercailzie in the

British islands is confined to Scotland, and is chiefly found in the counties of Perth and Forfar, from which, however, as a centre, it is gradually spreading into the wooded districts of neighbouring counties. This bird, there is reason to believe, became altogether extinct in Britain towards the close of the last century, and the existing capercailzies are the descendants of birds introduced from Norway by Sir T. Fowell Buxton in 1837. The ptarmigan is another British species confined to Scotland. It is only found on the higher grounds in the Highlands, and does not extend further south than the island of Arran. In winter its plumage changes from a greyish lichen-like colour to pure white, its garb both in summer and winter being eminently protective through its resemblance to surrounding objects. The red grouse is, as already stated, *the* national bird of Britain, being the only species not found elsewhere. While it remains so highly prized and protected for sporting purposes, there is not much danger of Britain losing its one ornithic treasure. The common pheasant is a semi-domesticated species introduced into this country probably by the Romans, its true home being the region about the Caspian and Black Seas. Of late a still showier species has been introduced—viz., Reeves's pheasant, remarkable for the enormous length and beauty of two of its tail feathers, each of these being nearly 4 feet in length. Pallas's sand grouse is one of Scotland's accidental visitors. This bird has its home in Central Asia, but occasionally, whether by an error, as Mr Seebohm suggests, in the direction of migration, or through unusually severe weather in its usual haunts, it reaches Europe in spring-time in vast numbers. The greatest visitation of these birds on record occurred in 1863, when, in Scotland alone, flocks of 20 at a time were seen, and they continued to be noticed in various parts of the country from May till October. The Order *Grallatores* includes bustards, plovers, herons, bitterns, storks, sandpipers, curlews, phalaropes, and coots. At one time the great bustard bred in Britain, now it is a rare visitant, not a single example having been chronicled since the winter of 1879-80. The last of the very few that have occurred in Scotland was shot a few years before in one of the Orkney Islands. In Mr Seebohm's valuable work on 'British Birds,' it is stated that there is no record of the occurrence of the squacco heron in Scotland. He has, however, overlooked the notice of its occurrence at Dalmahoy, near Ratho, where a specimen (now in the Edinburgh Museum of Science and Art) was shot in or about 1877. The heron is still a comparatively common bird throughout Scotland, but more especially on the west coast, where, according to Mr Gray, heronries occur at intervals from the north-west of Sutherland to Wigtownshire. The bittern, on the other hand, is becoming very rare, and is not known now to breed in any part of Scotland. The 88 species of Scottish *Natatores* include geese, swans, ducks, divers, grebes, auks, gulls, and terns. The west coast of Scotland, with its numerous islands, deep sheltered inlets, precipitous cliffs, abundance of fish life, and paucity of population, is the chosen home of British wild-fowl. The wild goose, which formerly bred in marshy tracts throughout the mainland of Britain, is now almost confined during the breeding season to the islands of the Outer Hebrides. The white-fronted goose has its headquarters in Islay, and the eider duck is found in greatest abundance in Colonsay. The puffin is said by Mr Gray to be probably the most abundant species of sea-fowl to be met with in the west of Scotland. A bird which formerly occurred, possibly in large numbers, on the west coast, was the great auk, which, it is to be feared, must now be removed from the lists of birds existing in this or any other country. The last living Scottish specimen was obtained near St Kilda in 1822, and was handed over alive to Professor Fleming, at that time yachting among the Hebrides. With a rope attached to one of its legs, it was allowed a daily bath in its own element; but on one of these occasions, it got loose and escaped. Remains of the great auk have been found in Caithness and Oronsay. Many of the gulls breed some distance inland, and the extensive moors of the Highlands, with their lochs and tarns, and numerous marshy islets, form splendid nurseries for these and other kinds of wild-fowl. The great skua is occasionally obtained during its migration on all parts of the coast, but its only breeding-places in Scotland are in the Shetland Islands, and chiefly in Unst and Foula. Of the terns, the Arctic tern is now found to be the most abundant in Scotland, and not the so-called common tern, which, however, occurs most commonly in England and Ireland. One of the most characteristic of Scottish birds is the solan goose. It has five breeding stations in Scotland—viz., Ailsa Craig, St Kilda, North Barra, Stack of Suleskerry, 40 miles west of Stromness, and the Bass Rock. It exists on these stations in immense hosts during the breeding season, and as the gannets feed entirely on fish, such as haddock, whiting, and herring, they are no mean competitors with man in securing the harvest of the sea.

Reptilia and Amphibia.—As already stated, the vertebrate fauna of Great Britain offers the greatest contrast to that of the European continent in the comparatively small number of its reptiles and amphibians. Belgium, for example, has 22 species, while Britain has only 13 and Ireland 4. This poverty of species in Britain is most probably due to the removal of its land connection with the Continent, which prevented any further migration of those undesirable

members of the European fauna. It must be presumed, in explanation of the still greater poverty of Ireland in this matter, that only 4 of the British species of reptiles and amphibians had reached so far west as Ireland when the latter became detached from the mainland of Britain. Scotland possesses most of the British species. Among incidental visitors belonging to this class is the hawk's-bill turtle, a specimen of which is stated by Dr Fleming to have been taken at Papa Stour, in Shetland. Of Scottish lizards there are only two species, the viviparous lizard and the slowworm. The former may be found on heaths in most parts of the lowlands, and the writer has taken it as far north as the island of Colonsay. It is an exceedingly active and agile creature, and if caught by the tail does not hesitate to part with that organ in order to get free. This brittleness of tail is common to all lizards. The slowworm is not a snake, as many suppose, but a lizard without legs. It is found in most parts of Scotland, and is, like the lizard, a timid, inoffensive creature, disinclined to bite, and perfectly innocuous if it did. It owes its specific name *fragilis* to its extreme brittleness. It so stiffens itself through fear, when caught, that it readily breaks in two if any attempt be made to bend it. Of Scottish snakes there are two—the viper and the ringed snake. The latter is of extremely rare occurrence in Scotland, although very common in England. It is without poison fangs, and is therefore perfectly innocuous. It is an excellent vermin-killer, and is often kept as a pet. The viper is *par excellence* the Scottish snake, and is the only venomous reptile in Britain. It is readily distinguished from the ringed snake by the greater breadth and the V-shaped marking of its head, and the confluent series of lozenge-shaped black spots running along its back. It is possessed of fangs, the poison from which, when injected into the human blood system, produces serious results. In the case of healthy adults the bite of the British adder rarely, if ever, proves fatal. With the young and the infirm, however, death has been known in several instances to have resulted from this cause. They occur in dry heaths and waste places throughout the Highlands, but are by no means common anywhere in Britain. They avoid man whenever it is possible, and the only danger of getting bitten is by treading on them unawares. Of *Amphibia* there are 6 species found in Scotland—viz., 1 frog, 2 toads, and 3 newts. The common frog is an inhabitant of marshy grounds throughout Britain. Its eggs are deposited at the bottom of water, and the young when they leave the egg are purely aquatic animals. These tadpoles, as they are called, breathe by gills, and being without limbs swim like fishes. As they grow older limbs begin to appear and the tail to disappear, while the gills give place to air-breathing lungs. When these changes are completed the young frog leaves the water and spends thereafter an amphibious existence. Frogs live chiefly on worms and insects, and in winter time, when these are not to be had, they congregate in great numbers in the muddy bottoms of pools, and burying themselves in the mud, they hibernate. A large frog occurs in many parts of Scotland, being specially abundant in the neighbourhood of Edinburgh. This at one time was described as identical with the edible frog of the Continent. Bell, the author of a work on *British Reptiles*, examined specimens of it, and declared it to be a new species, which he named *Rana Scotica*. Further examination, however, of a large number of specimens obtained from the Braid Hills, near Edinburgh, convinced him that after all it was merely a large variety of the common frog. The true edible frog does not occur in Scotland, although it is found in England. The toad, like the frog, is generally distributed over the country. Its form is not prepossessing, and this has led to the attributing of poisonous qualities to it. Than the toad, however, there is no more inoffensive animal; and any one who cares to make a pet of it, as the writer has done, will find much to interest in the study of its habits. Stories that have been told regarding the finding of frogs and toads enclosed in solid rock—that rock being frequently of Carboniferous age—will not bear the slightest scientific scrutiny. No one with any intelligent appreciation of the time that has elapsed since even the newest rocks were formed can entertain the possibility of such an occurrence. The Natter Jack toad is a more active creature than the common species. In Scotland it occurs only in marshes on the shores of the Solway Firth, where, however, according to Sir Wm. Jardine, it is very abundant. The newts differ from frogs and toads in retaining the tail throughout life. They are also much more aquatic, only leaving the water in autumn when their period of hibernation is approaching. The warty newt, the smooth newt, and the palmated smooth newt are the three Scottish species. They are more or less common in ponds and ditches throughout Britain, where they feed chiefly on aquatic insects and worms. The warty newt also devours the tadpoles of the frog, whose numbers it thus helps to keep down.

Pisces.—There are no fewer than 15 species of fishes altogether peculiar to the British Islands. As might be expected, however, these are all fresh-water forms, and most of them inhabit lakes, to which, owing to the barriers to migration, they are frequently confined. They belong exclusively to the family *Salmonidæ*, and while Dr Günther regards them all as good and distinct species, many of them are regarded by Dr Day in his new work on *British Fishes* (1884) as mere varieties chiefly of the salmon and the trout. Three at least of the

15 species may be regarded as specially Scottish—viz., the Loch Stennis Trout (*Salmo orcadensis*), found only in the small lakes on the mainland of Orkney. The Loch Leven Trout (*Salmo levenensis*), formerly confined to Loch Leven, but now spread all over the kingdom by means of eggs artificially bred at Howietoun, Stirlingshire. It is regarded by many as a land-locked variety of the sea trout, Loch Leven having had at one time a connection with the sea sufficient to allow of the passage to and from it of the salmon and sea trout. Such connection no longer exists, and the Loch Leven trout may, it is conjectured, be the descendant of sea trout altered to suit their land-locked condition. A still more remarkable instance of restricted distribution is to be found in the Vendace, which occurs in two small lakes near Lochmaben in Dumfriesshire. It is a fish about 9 inches in length, and is considered a great delicacy in the locality. Other forms of *Salmonidæ* found in Scottish and English lakes are the powen of Loch Lomond, the black-finned trout, and the great lake trout. There are altogether 25 species of fresh-water fishes found in Scotland, exclusive of such forms as the salmon and sea trout, which pass a portion of their lives in the sea. There are many fresh-water fishes, however, more or less tolerant of salt or brackish water, as the minnow, eel, and river lamprey. On the other hand, many of the British marine fishes, as the flounder and the sticklebacks, can tolerate brackish and even fresh water. The grayling is an English river fish that has been introduced of late years into Scotland. It is now thriving exceedingly in the Clyde, Tweed, and Teviot. Of marine fishes no fewer than 165 species have been taken off the Scottish coast; many of these, however, are to be regarded as merely accidental visitors. They belong to the following Orders :—

Acanthopterygii,	72 species.	Ganoidei,	1 species.
Anacanthini,	38 ,,	Elasmobranchii,	26 ,,
Physostomi,	15 ,,	Cyclostomata,	2 ,,
Lophobranchii,	6 ,,	Leptocardii,	1 ,,
Plectognathi,	4 ,,		

The Acanthopterygians, or spiny-rayed fishes, although the most numerous in species, contain few that are of importance to man. The most important economically is the mackerel, which appears off the Scottish coast late in summer. Other food fishes of this Order found in our waters are the mullets, gurnards, sea-bream, and John Dory. The latter is a rare fish in Scotland, not more than one or two being caught in the Firth of Forth in the course of a year. The flesh of the wolf-fish is usually sold in Scottish markets as John Dory, and in the west of Scotland the sea-bream is also known by that name. The only Scottish fresh-water fish belonging to this Order is the perch, found plentifully in lakes, ponds, and rivers south of the Forth. The *Anacanthini*, or spineless fishes, are *par excellence* the food fishes of the world, and Scotland possesses the most important species. These include the cod, haddock, whiting, ling, hake, coalfish, and torsk among the *Gadidæ*, and the turbot, sole, halibut, plaice, and flounder among the *Pleuronectidæ*, or flat fishes. The latter are generally found on sandy bottoms, and in Scotland they are especially abundant in the estuaries of the east coast. The sole is not a plentiful species in Scottish waters. The *Physostomi* include the salmon and herring families. In the Tweed and Tay Scotland possesses the two finest salmon rivers in Britain; while its herring fishery is the most valuable industry of the kind in the world. The herring visits the Scottish coast twice in the year for spawning purposes—namely, in spring and autumn. That they are never wholly absent is proved by the fact that the herring is found at all seasons in the stomach of the cod. It is during the autumn spawning that the chief herring harvest is gathered; but in early spring, when the herring is spawning on the Ballantrae Bank, off Girvan, an important fishery is carried on. Other species of *Clupeidæ* found in Scotland are the sprat, pilchard, and shad. The Lophobranchs comprise the pipe-fishes, of which there are five Scottish species, and the Hippocampus, or sea-horse. The latter has obtained a place in our fauna through the finding of a dead specimen in the Orkneys, and of two cast ashore at Banff after a storm. The pipe-fishes are remarkable from the fact that the males have a pouch in which the eggs of the female are placed, and in which they remain until hatched. The *Plectognathi* include such stray visitors from warm seas as the file-fish and globe-fish; also two species of sunfish, which are more at home in Scottish waters. These are occasionally captured as they lie basking in the sun on the surface of the water, and on such occasions they permit a boat to approach close to them without showing any fear. The sturgeon is our only Ganoid fish, and it occurs at intervals on every part of the Scottish coast. Of sharks and rays (*Elasmobranchii*) no fewer than 26 species occur, many of them, as the picked dogfish, in incredible numbers. The basking shark—the largest of known fishes—is somewhat common in the Orkney and Shetland Islands, but it is a comparatively harmless species. The Greenland shark, the thresher, and the blue shark also occur. Among the most interesting of recent additions to the Scottish fauna was that made by the capture off Wick in 1884 of a specimen

of the Torpedo Ray (*Torpedo nobiliana*). Of the other rays the commonest species in Scottish waters are the skate and thornback, both used as food. There is no special fishery for these, but they are caught in large numbers by trawlers on the east coast, and sold at a low price. The hag-fish, which bores into and devours the bodies of other fishes, and the sea lamprey, are the Scottish species belonging to the order Cyclostomata; while the lancelet—the lowest of all vertebrate animals—represents the *Leptocardii*.

Mollusca.—Passing from the vertebrata or back-boned animals, the invertebrate division of the animal kingdom remains to be dealt with. This includes a vast assemblage of species, but unfortunately only a few of its sub-divisions have been thoroughly worked out by naturalists. One of these is the *Mollusca*, regarding the British species of which fairly complete histories have been furnished by Forbes and Hanley, and more recently by Gwyn Jeffreys. According to the latter, the total number of species of undoubted British mollusca is 686. These consist of 124 land and fresh-water shells, of which 15 are bivalves (*Lamellibranchiata*) and 109 univalves (*Gastropoda*); and 562 marine species. The latter are thus classified: Brachiopoda, 6; Lamellibranchiata, 171; Gastropoda, 366; Pteropoda, 2; and Cephalopoda, 12. Of the marine species, no fewer than 72 have not as yet been found beyond the British isles and seas. The shells of several species are occasionally dredged in British waters, and included in lists of British shells which have never been found living in our area, although they still exist in high northern latitudes. A marked feature in the molluscan fauna of Britain is its antiquity; thus, of the 124 land and fresh-water shells at present existing in Britain, no fewer than 80 species were living in Tertiary times. Although there are many species exceedingly local in their distribution, yet the great majority of British shells occur in Scotland. The land molluscs belong for the most part to the family *Helicidæ* or snails. They are found chiefly in connection with the vegetation upon which they feed, but certain species affect particular situations; thus, *Helix aculeata* is usually found among dead leaves and moss in woods. The commonest Scottish species is *Helix nemoralis*, remarkable for the endless variety of colour and pattern in its shell. *Helix pomatia*—the snail most commonly eaten on the Continent—does not occur in Scotland. Some species, as *Achatina acicula*, are subterranean; others, as the slugs, have no external shell. They can all be found most readily during moist weather. Of fresh-water bivalves, the most important Scottish species is the pearl mussel. It is found in most of the mountain streams, but the Scottish pearl fishery has been chiefly prosecuted in the rivers Forth, Tay, Earn, and Doon. The largest of Scottish fresh-water shells is the *Anodonta cygnea*, found in lakes, canals, and slow-flowing rivers. It attains a length of 3 inches with a breadth of 5·5 inches. Another curious form is *Dreissena polymorpha*, somewhat resembling the common mussel, which, in Scotland, seems to be confined to the canal at Edinburgh. It was first observed in Britain in 1824, and is believed by some naturalists to have been originally a marine form, as it occurs fossil in marine strata.

The sea bed has been divided by naturalists into four zones, each characterised more or less distinctly by its molluscan fauna. The Littoral zone lies between tide marks, and is usually clothed with an abundant crop of seaweed. The molluscs of this zone are familiar to every walker by the seashore, as they are uncovered at intervals by the receding tide. They comprise the periwinkles, dog whelks, limpets, and chitons; and several of them are largely used in Scotland for food and bait. Where the Littoral zone is sandy and, consequently, bare of vegetation, a different set of molluscs are found, as cockles, mussels, razor shells, myas, etc. These are for the most part boring molluscs that bury themselves in the sand, and they are also largely used as food and bait. Other borers found in this zone are the different species of *Pholas*, which drill their way into sandstone, limestone, and shale; and the *Teredines*, or ship worms, which bore their way into wood. The Laminarian zone extends from low-water mark to a depth of 10 fathoms, and its seaweed nourishes a large number of phytophagous molluscs, including species of *Patella*, *Trochus*, and *Rissoa*. It is the zone also of the sea-slugs (*Nudibranchiata*). The Coralline zone has a vertical range extending from 10 to 50 fathoms. Marine vegetation is scarce in this area, and consequently the molluscs are for the most part animal feeders. They include whelks, spindle shells, and oysters on stony ground, and many species of *Cardium*, *Cyprina*, etc., on sandy or muddy bottoms. Beyond the Coralline lies the Deep Sea zone, which includes all depths beyond 50 fathoms. So far as British seas are concerned, this zone is rich in molluscan life. This is especially the case on the great fishing 'banks,' to which fish are said to be largely attracted by the abundance of molluscan food.

Of the six species of British Brachiopoda—those curious shells which are found so abundantly as fossils in the older formations—4 are found in Scottish waters. *Terebratula caput-serpentis*, the commonest form with us, is not found in English waters. It occurs on the west coast of Scotland throughout all the zones of vertical depth. Of the highest group of molluscs—the Cephalopoda—Scotland possesses 7 out of the 12 recorded species. These include the common squid, the cuttlefish or sepia, and the octopus. Many years ago one of the so-called

giant cuttlefishes was found stranded in the Shetlands. It measured altogether 23 feet in length, the body alone measuring 7 feet.

Insecta.—The class of insects includes a larger assemblage of species than any other similar division of the animal kingdom. They most abound in tropical regions, but are also largely represented in temperate countries. The insects of the British Islands differ but little from those of the Continent, and so many of the species that were at one time supposed to be peculiar to our island have since been discovered on the Continent, that 'our best entomologists,' says Mr A. R. Wallace, 'have come to take it for granted that all our supposed British species are really natives of the Continent, and will one day be found there.' That all our species have had a continental origin, is extremely probable; but having regard to the different climatic and other conditions that prevail in Britain, now that it is an island, it is possible that British species, which at one time were also continental, have now become peculiar to Britain through their extinction elsewhere. Of late years the entomology of Scotland has been studied with considerable zeal; much, however, remains to be done before all the Orders of insects found in Scotland have been exhaustively worked out. Much of this recent work will be found in the pages of the *Scottish Naturalist*, an excellent biological magazine edited by Dr Buchanan White. The Orders that have received most attention are the *Lepidoptera*, or butterflies and moths; and the *Coleoptera*, or beetles. Of *Lepidoptera* there are about 2000 British species, 66 of which are butterflies and the rest moths. Of the butterflies, 38 occur in Scotland. The most common forms are the cabbage butterflies (*Pieris*); the largest and most gaudy are the red admiral and the small tortoiseshell. Now that the large copper (*Polyommatus dispar*), once common in the fens of England, is extinct, Scotland possesses the only British butterfly sufficiently distinct from the Continental form as to constitute an undoubted variety. This is *Lycæna astrarche* var. *artaxerxes*, a species which long had its headquarters on the slopes of Arthur's Seat. The best localities there were, however, destroyed by the construction of the carriage road between Edinburgh and Duddingston. There are a few localities still known for it in the neighbourhood of Edinburgh, and, according to Stainton, it is to be found on the slopes of several Scottish hills. *Erebia* is a peculiarly northern genus, its species occurring in the mountainous districts of Scotland and the north of England. Of the 2000 British moths, nine are said to be peculiar to Scotland. The Shetland Islands have a peculiar variety of the ghost moth, in which the usual white is replaced by yellow and buff. The largest of Scottish moths is the death's-head, not common anywhere, but found occasionally in considerable numbers in the larval state on the leaves of the potato. Most of the moths are nocturnal, and these, as a rule, are of a dingy colour; but there are many day-flying and crepuscular species, as the burnet and hawk moths, that rival the butterflies in the brightness of their colouring. Many of the Scottish *Lepidoptera* are classed among the foes of the farmer, the gardener, and the forester. These include such forms as the cabbage butterfly, the turnip moth, the goat moth, and the codling moth. The *Coleoptera* or beetles are a still more numerous order of insects, the British Islands alone possessing nearly 4000 species; 72 of these have not as yet been found outside the British area, but many of these, there is little doubt, will yet be recognised on the Continent. Of those which, in the opinion of so competent an authority as the late Mr Rye, are likely to be peculiar to the localities in which they occur, seven belong exclusively to Scotland. One of these—*Apion Ryei*—has as yet only been found in the Shetland Islands; another—*Anthicus Scoticus*—is from Loch Leven; while a third—*Agathidium rhinoceros*—is, so far as known, confined to old fir woods in Perthshire. The other three are *Oxypoda Edinensis*, *Anistoma clavicornis*, and *Telephorus Darwinianus*—the last a sea-coast species described as a stunted form of abnormal habits. The *Coleoptera* of Scotland have been collected and studied by such well-known entomologists as Duncan, Wilson, Murray, and Sharp. So long ago as 1834 the *Coleoptera Edinensis* of Duncan and Wilson was published, in which fully 700 species of beetles from the neighbourhood of Edinburgh were described. A greatly extended list appeared in Mr Andrew Murray's *Coleoptera of Scotland*, published some time after. The fullest list, however, is that which has appeared during recent years in the *Scottish Naturalist*, by Dr Sharp, the greatest living authority on the *Coleoptera*. The other Orders of insects have not received the attention bestowed upon the two already noticed; certain families, however, belonging to these Orders have been worked with comparative fulness by specialists. Among these may be mentioned the researches of Mr Cameron and Professor Traill on gall flies (*Cynipidæ*), Buckton's *Monograph of British Aphides*, and Lubbock's *Collembola and Thysanura*.

Crustacea.—The seas and estuaries around the Scottish coast abound in a great variety of Crustaceans. There is hardly a rock between tide marks that is not encrusted with the common barnacle, and every bit of sandy shore is alive with sandhoppers. The Littoral zone everywhere abounds in shore crabs, shrimps, and sea-slaters, while at greater depths occur the

edible crab, the lobster, and many others. In addition to the larger forms, Scottish waters abound in *Entomostraca* and *Copepoda*, which make up for their almost microscopic minuteness by the vastness of their numbers. So numerous, indeed, are they as sometimes to colour the sea over considerable tracts. The crustacea are pre-eminently the scavengers of the sea, devouring indiscriminately both dead and living prey, while many are parasitic on fishes. In turn they are preyed upon, chiefly by fishes, in whose bill of fare they form a most important item. The mackerel, the herring, and other shoal fish are often found gorged with minute crustaceans, and what is known as 'herring food' is an immense aggregation of minute copepods, which sometimes forms a scum on the sea for miles. The larger species, as crabs, shrimps, and Norway lobsters, are a favourite food of the cod and other members of the family *Gadidæ*. Several members of this class are also used as food by man, and Scotland possesses considerable crab and lobster fisheries. Of the latter the most important are on the west coast and adjacent islands. There the lobsters are collected in perforated wooden boxes, which are kept floating in the sea at the various points, where steamers call at intervals to convey such marine produce to the English markets. The common shrimp is found abundantly on sandy bottoms around the coast, but it is in less request as an article of food in Scotland than it is in England. Hermit crabs are common everywhere on the coast. They are alone among crustacea in their habit of dwelling within the dead shells of molluscs. Land and fresh-water crustaceans are common in Scotland, small ostracods being abundant in stagnant water, and 'slaters' (*Porcellio*) common everywhere under stones and decaying wood. Lists of the crustacea of particular areas of Scottish seas have been published; thus the student will find a list of the crustacea of the Firth of Forth in Leslie and Herdman's *Invertebrate Fauna of the Firth of Forth* (1881). The completest catalogue of Scottish Crustacea, however, is probably that contained in an appendix to Smiles' *Life of a Scottish Naturalist*, in which no less than 295 species are given as found by Edward in the Moray Firth.

Echinodermata.—Starfishes, sea-urchins, and sea-cucumbers are tolerably common in the seas around Scotland, 77 of the 84 species given by Edward Forbes being Scottish. The most abundant starfish on our coast is the common Crossfish (*Asterias rubens*), usually with 5 rays, and common at low water, although it occurs at all depths up to 30 fathoms. Another common form is the Brittle Star (*Ophiothrix rosula*), which owes its trivial name to the facility with which it throws off its arms when touched. One of the most remarkable of Scottish species is the Feather Star (*Antedon rosacea*). It has been recorded at Peterhead, but nowhere else on the east coast, whereas it is tolerably common on the west, especially in Lamlash Bay. This starfish is of special interest from the fact that at an early stage of its growth it is fixed on a long jointed stalk, and is thus a connecting link between the starfishes proper and the crinoids, which are chiefly now a fossil group. One of the handsomest of Scottish species is the Sunstar (*Solaster papposa*), of a red or purple colour above, and having from 12 to 15 rays. One of the rarest and most striking forms is the Cushion Star (*Hippasteria plana*). No one who has scanned the bottom of the sea, at a depth of two or three fathoms, on the west coast of Scotland, can have failed to observe the numerous sea-urchins that lie dotted here and there over its surface. Of these there are comparatively few Scottish species, the most common being the Egg Urchin (*Echinus sphæra*). Seven species are noted by Leslie and Herdman as occurring in the Firth of Forth. The Sea-Cucumbers (*Holothuria*) have not the elegant or symmetrical forms of the starfishes or sea-urchins, nor do they occur in our waters in such abundance. One of the largest known species—the Great Sea-Cucumber—was first taken in British waters off the Shetland coast, where it is tolerably common, the Shetlanders naming it 'sea-pudding.'

Cœlenterata.—This division of the animal kingdom includes the so-called zoophytes, jelly-fishes, sea-anemones, and corals. The hydroid zoophytes are plant-like structures, often mistaken for sea-weeds, but which in reality are immense aggregations of minute polyps connected together by the chitinous substance which forms the stalks and branches. Nowhere in Britain have these zoophytes been more fully investigated than in the basin of the Firth of Forth, and its species include most of those known to occur in Scottish waters. In Leslie and Herdman's list no fewer than 85 Firth of Forth species are recorded. Jelly-fishes are common on the Scottish coast, and often after storms they cover large tracts of the seashore. In calm, summer weather, especially on the west coast, they may often be seen in thousands, displaying their shapely forms and most delicate colours, and moving gracefully about by the alternate expansion and contraction of their swimming bells. The species of these delicate organisms are not yet fully worked out. Sea-anemones are a well-known group that occur in abundance on all the rocky parts of the British coast. They are most numerous, both in species and individually, on the south coast of England, but of the 75 British species described by Gosse in his *History of British Sea-Anemones* more than a half occur in the Scottish area. The most abundant species is the Beadlet (*Actinia mesembryanthemum*), readily distinguished

by its red or liver-brown colour, and its marginal ring of azure blue dots. It can be readily kept in confinement, and a specimen removed from the Firth of Forth by Sir John Dalyell in 1828 is still alive. This unique specimen is well-known to naturalists as 'Granny.' Another common and much more showy species is the Dahlia wartlet (*Tealia crassicornis*). Although much larger than the beadlet, it is more liable to be overlooked, as it generally contrives to conceal itself under a coating of gravel and broken shells. Another common Scottish species is the cave anemone (*Sagartia troglodytes*), which usually inhabits the crevices of rocks. The mottled grey colour of its disk gives it a general resemblance to the rock on which it is fixed, and so helps to conceal it. The finest of the British species—the Plumose anemone (*Actinoloba dianthus*)—occurs on both the east and west coasts of Scotland. It is sometimes found between tide marks, but more usually at the depth of a few fathoms. Mr C. W. Peach states that he has found hundreds, some white and others brilliant red, side by side in the same pool, between tide marks, at Peterhead; and the writer has taken it in the Firth of Forth, attached to the back of a crab (*Hyas araneus*). The student will find ample information regarding all the Scottish species in Gosse's work already referred to. Corals are usually associated with tropical regions, but there is one group of British *Actinia*, in which a coralline structure is developed. These are the Cup-Corals (*Caryophyllia*), the tissues of which secrete calcareous matter. They occur sparingly in the Shetland Islands, Moray Firth, and Oban Bay. Allied to the Anemones are the Alcyonarians and Pennatulids, several species of which occur in Scottish waters. The most remarkable of these is *Funiculina quadrangularis*, which, after having been dredged upon the Norwegian coast by Professor Malm, was afterwards obtained in the Bay of Oban. It attains a length of about 5 feet. A considerable number of species of sponges belonging to the *Calcarea* and *Fibrosa* are found off the Scottish coast. Some of these form incrustations on stones about low-water mark; others, found in deeper water, give off branches, and have thus a shrub-like appearance. Twelve species of sponges have been noted from the Firth of Forth. There are other groups of Marine Invertebrata, such as Polyzoa, Tunicata, Vermes, and Foraminifera, which there is not space to notice further, but the reader will find lists of Scottish species belonging to these and other groups in Dr M'Intosh's *Marine Fauna of St Andrews*, Leslie and Herdman's work already referred to, the *Scottish Naturalist*, and the *Proceedings of the Royal Physical Society*.

VIII. BOTANY.

By Symington Grieve.

INTRODUCTION.

Botany is the science that treats of plants, and as the plant life of every country is ever a prominent feature of the landscape, except where such peculiar conditions exist that the larger forms of vegetation cannot grow—as in deserts—it follows that Botany is a science that, in one or other of its more simple departments, forces itself upon the observation of all.

Each portion of the world has its own peculiar forms of plant life, varying from the giant tree—the chieftain of the forest—down to the minutest vegetable cell that requires a powerful microscope to bring it within the reach of vision. In the equatorial region with its intense heat, you have the dense jungle and forest, one of the most striking features of which is rapid growth. But as you proceed northwards or southwards towards either of the Poles, you get into more temperate regions where the vegetation generally makes slower progress, until at the extreme northern or southern limits almost the only forms of plant life to be found are a few mosses and lichens.

The various zones of elevation also give similar results, the high mountains that exist nearest to the equator yielding the best illustration for our purpose. The base of a mountain, we shall suppose, is situated on the equatorial line, and around that base are the dense jungle and forest of the tropics; as we ascend we discover the forms of vegetation gradually changing to those that occur in the more temperate regions of the north and south, many of the exact forms of plant life that grow in those regions being met with; and at last, at the line of perpetual snow, we find similar forms to those that exist at the Arctic or Antarctic Poles.

The law of perihelion and aphelion must be kept in mind; and if its operation brought with it the conditions that enabled a flora similar to that of Southern Europe to migrate to Scotland, as proved by the Coal Measures and fossil remains in other strata, it would also account

for the glacial periods which have left their traces in the striation of the rocks. The latest researches seem to prove that the dicotyledonous vegetation of the world originated in the extreme northern portions of its surface, or, perhaps it would be more correct to say, that the oldest known dicotyledon has there been found. It is a species of poplar (*Populus primeva*), which was discovered at Komé, in North-West Greenland, in beds of Middle Neocomian Age.* We leave this question for the geologist to discuss, and shall only consider the later steps in the probable history of the Scottish Flora that led up to its present state of existence.

THE GEOLOGICAL PERIOD.

At first sight it may seem unnecessary to premise an article on the Botany of Scotland with geological remarks. But if the facts we have just mentioned are borne in mind, such remarks will be seen to aid greatly in forming true opinions, not only on the present plant life of Caledonia, but on the geological period or periods when equisetums, marsh grasses, reeds, club mosses, tree ferns, and coniferous trees flourished on our shores, and a luxuriant vegetation prevailed such as is found in warm, temperate, or sub-tropical regions. As the Geology of Scotland is considered elsewhere in these pages, we shall only mention it briefly from a botanical point of view; but new thoughts must surely suggest themselves to the reader when he ponders the immense period of time that has elapsed since the formation of the first deposits of the Coal Measures began.

The mind must stretch back to the time when our Scotch mountains greatly exceeded their present height, while the country at their base was covered with a dense vegetation. The broad valley that crosses Scotland between the Firths of Clyde and Forth expanded out at each end in the geological periods to a greater extent than at present, and formed a vast plain near the sea-level, which at the western side of the country comprised most of Ayrshire, Renfrewshire, and the Lower Ward of Lanarkshire; and at the eastern side of the country the greater part of West and Mid Lothian, with a portion of East Lothian, along with the county of Fife. There can also be little doubt that this tract of low-lying ground stretched out into what is now the German Ocean, the whole of this country receiving the waters of one or more rivers that probably fell into either the Irish Sea or the German Ocean, or perhaps into both. However this may have been, we find that the deposits of vegetation formed here must have been frequently submerged, and were afterwards covered with the *detritus* that was carried down from the high mountain ranges on the north and south. In all probability the greatest covering-in of such deposits occurred at the time of great floods caused by a heavy rainfall or a sudden thaw. That this process was often repeated, we have the best evidence in the coal-fields of the district, which show a period of vegetation, then the covering-up process in the deposits of stone found above each seam of coal; and the number of repetitions of the process may be counted by the number of seams. In the neighbourhood of Dalkeith, according to the Geological Survey of Scotland, from the top of the Coal Measures to the base of the Carboniferous Limestone series, there are no less than sixty-three seams of coal. The uppermost of these seams is met with about 250 feet from the surface, and the lowest at a depth of about 3140 feet. Above, between, and below the coal are numerous beds of shale, sandstone and shale, or shale with ironballs intermixed. The first bed below the surface is found at a depth of about 90 feet, and the lowest at 3153 feet. It fills the mind with wonder when we try to contemplate what the lapse of time must have been to enable these formations to be built up. As each seam varies in thickness, so probably by the thin seams is denoted a short period of rank vegetation, and by the thicker a longer period of the same kind in proportion to their thickness; though in the hotter periods, as when the Northern Hemisphere was in perihelion, if Dr Croll's theory is correct, possibly a more rapid growth took place. During those geological periods the level of the land changed from time to time considerably, and there are evidences that there were sinkings as well as upheavals. The action of the streams in cutting out courses for themselves from the upheaved portions must not be forgotten.

The time when the Coal Measures were formed was characterised by the quantity and the variety of the ferns. At the present we may reckon that we have about 50 different species in Britain; but when the Coal Measures were formed, we have evidence in the remains that there were upwards of 140 varieties. A warm and moist climate is what we believe prevailed in Scotland at that time, much like the climate which we try to imitate artificially in our hot-houses, and which prevails naturally in New Zealand and the surrounding islands at the present. If we accept the results of recent researches, we may reasonably infer that the temperature of summer and winter at that period did not differ much, and that there was a much more equable climate than that which now exists in Scotland. The researches of

* Professor Nordenskjöld in a lecture to the Royal Swedish Academy, given in the *Geological Magazine*, November 1875, p. 529.

Principal Dawson and others have conclusively established that the coal trees grew near broad estuaries and on immense flat plains near the sea-level, but not in swamps and shallow water as was at one time supposed. Such trees as the *Sigillariæ* and *Lepidodendra*, of which our Coal Measures are largely composed, would grow for many generations of trees upon such sites; and then came a period when the plain was submerged under the sea, the whole of the forest being covered with thick deposits of sand and gravel and other sediment carried down by streams from the adjoining land.

THE POST-GLACIAL PERIOD AND THE REINTRODUCTION OF PLANT LIFE TO SCOTLAND.

In considering the botany of an insular country, the first thoughts that naturally occur to the inquiring mind are—Where did its plant life come from? Is it peculiar to the country itself, or is it the same as is found on the nearest continent? and, if the same, How came it to be distributed? or does it represent only some of the continental plants? These are questions that deserve consideration. As far as Britain is concerned, we may conclude that we owe nearly the whole of our present flora to the European continent, as there is good evidence that at more than one period Britain was not insular, but formed part of the continent itself. Besides, the flora of both corresponds in so many respects, that, allowing for variations in climate, soil, and elevation, we can account for all, or most all, the differences that occur.

Within the limits of Britain it might be thought that we should find the same plants growing from Lands End to John o' Groat's House; but this is not so, and the botanist from the south of England will find in Scotland from the Tweed to the Pentland Firth many plants that he does not find in his southern home, and also numbers awanting which are to him familiar friends. He will find some peculiar anomalies in the botany of Scotland which require careful consideration, and which shed considerable light on the changes of climate undergone by the country, and also on the way in which the vegetation was killed out during the 'glacial period,' and again redistributed when a time of higher temperature returned.

If the botanist proceeds along our coasts, he will find such plants as *Armeria maritima*, *Cochlearia officinalis*, *Sedum Rhodiola*, *Plantago maritima*, and some others in great abundance. But if he goes inland he will find very few stations for those plants until he ascends to near the summits of our highest mountains. The questions must naturally occur to him—Why are those plants not found in the intermediate zone as plentifully as at the sea coast or near the mountain summits? and how came they to be distributed either from the sea coast to the highest elevations, or from the highest elevations to the sea coast, without being equally distributed over the intermediate zone?

We may premise that during the 'glacial periods' the plant life of Britain was almost, if not altogether, destroyed; and that, in any case, the only forms of vegetation were such as are found at the present time near the level of the sea along the shores of Greenland or in the Arctic zone in Scotland, where similar forms occur, and which is at an elevation of over 3000 feet above sea-level—in other words, the summits of our highest mountains. At the time of the 'glacial periods' this zone in Scotland, instead of being at the mountain summits, was at the sea-level, and it is from this point that these plants must have been redistributed, and not only these plants but many others. The peculiarity of such plants as *Armeria maritima*, *Cochlearia officinalis*, *Sedum Rhodiola*, and *Plantago maritima* is, that they are not confined to one zone, but exist wherever congenial climatic conditions are met with, at various elevations from the sea-level to the mountain tops. The first necessity for their growth is abundance of moisture, and the second a situation free from other forms of vegetation; and it is this latter cause that accounts for their not appearing frequently in the intermediate zone, as there are so few suitable stations within its limits where there are wet rocks, or where the soil is so poor that other forms of vegetation do not grow so strongly as to choke these plants. There are, however, one or two stations in the intermediate zone where we know *Cochlearia officinalis* ('the Scurvy Grass') grows, such as the upper part of Borthwick Water in Roxburghshire, where it is found abundantly from 700 up to 1200 feet above sea-level, with straggling plants at lower elevations. It is found also at Roberts Linn at the head of the Slitrig, another tributary of the Teviot. There is also a station near Innerleithen in Peeblesshire, at an elevation of about 450 feet; and it grows on the ruins and also the ground at Melrose Abbey, but here it was probably cultivated by the monks. *Armeria maritima* ('the Sea Pink') is found as a border-edging in many gardens in the intermediate zone; but if other forms of vegetation are not carefully kept under by weeding, it quickly dies out, and it has no greater enemy than grass. *Sedum Rhodiola* ('Roseroot Sedum') is found growing abundantly in gardens, and frequently spreads on borders and flower-plots so much that it becomes a weed. It is occasionally found growing on the ledges of wet cliffs in the intermediate zone. It appears to be more abundant on the west than on the east of Scotland. *Plantago maritima* ('the Sea Plantain') is found abundantly

in Glenlyon near Innerwick, at an elevation of from about 800 to 950 feet, growing on the hill-sides; but it does not appear to be so luxuriant in growth as the specimens usually found near the sea coast.

The conclusion we therefore naturally come to is, that these plants, having greater powers of accommodation to climatic circumstances than many others, grow at any suitable stations where they have not been killed out by forms of vegetation of ranker growth; and that they are found at all elevations, but thrive best on the cliffs and beaches around our coasts, and also on the summits of our mountains, where they have plenty of moisture and few other plants to compete with in the struggle for existence. In Norway many plants that are found in Scotland growing only near the summits of the mountains, are met with by the wayside or in the fields; while in Greenland many of what are considered our rarest alpines are found growing near the sea-level.

There are some apparent contradictions to the theory that the Scottish flora has ascended from our sea coasts, but these, on investigation, will be found to be more apparent than real. For instance, we frequently find that stray plants from the Arctic zone, or the summits of our mountains, are found growing in or near the beds of streams that flow from some of our higher peaks, but these generally do not flourish luxuriantly, and soon die out, to be replaced by plants that are better suited for the situation. We have observed in the Highlands that the rugged beds of some of the mountain burns are fringed with the *Alchemila alpina* ('Alpine Alchemil') growing in the crevices between the granite boulders down to the point where the burn joins a larger and more slowly-running stream with grassy banks, and there this plant disappears because it finds no more congenial situations for its growth. But if, as has been urged, this is a proof that our alpine plants found at various elevations above our sea shores must all have been distributed by our streams from higher levels, how did the parent plants from which those plants have sprung originally become located at our mountain tops, unless they gradually ascended there with a receding Arctic climate? We therefore are led to the conclusion that the plants we have referred to, along with the other alpines that form our Scottish flora, first reached our shores as the ice of the last great glacial period receded and removed its iron grasp from our land. As the ice melted on the lower ground, and receded up to the higher elevations, it was followed in its ascent by the Arctic vegetation, to which in Scotland we give the name of 'Arctic-alpine,' owing to the high altitudes it occupies in our country.

WHENCE DID THE PRESENT PLANT LIFE OF SCOTLAND COME?

Having now informed our readers of the mode by which, in all probability, the flora of Scotland that succeeded each glacial period was distributed, it comes for us to consider, Whence came the present plant life of Scotland, and how did it reach our shores? During the last glacial period we believe that the bed of the German Ocean was filled with immense masses of ice, that extended for a great distance southwards over the European continent; and at this time, which was towards the end of the glacial epoch, Britain is believed to have been submerged to the extent of 1300 feet, for beds of gravel containing sea-shells have been found at that height on some of our hills. Some believe that this great depression was caused by a displacement of the earth's centre of gravity, owing to the weight of the tremendous ice-cap that covered the Northern Hemisphere. There is evidence to show that since the last glacial epoch there have been at least two periods when Britain was not insular, but formed an integral part of the European continent. During the first of those, which we shall call 'the first post-glacial period of upheaval,' it is supposed that the bed of what is now the German Ocean was dry land, and that it was across this wide tract of country that the first of the present flora and fauna came to Britain to fill up the void caused by the ice age, which had killed out all, or almost all, things living. It is probable that this period of upheaval was of considerable duration, as it must have been at this time that our Arctic-alpine, and possibly also our sub-alpine, flora reached Scotland, and also got as far west as Ireland, with which there was a land attachment. We can easily picture to ourselves the advancing migration of plant life making its ways westwards as soon as the conditions existed that enabled each class of plants to live. In the vanguard would be the Arctic-alpines, with a few lichens and mosses, followed by the alpine, sub-alpine, Lowland, and Littoral forms of vegetation, all pressing and jostling each other in their advance westwards. The Arctic-alpines would take possession of a tract of suitable soil, and would willingly rest in their travels; but through the gradual withdrawal of the ice and the consequent higher temperature, soil and climate soon became unsuitable, and these plants required to advance to where they would have more cold and moisture. Their place is soon taken by the alpine vegetation, which is again succeeded by the sub-alpine, Lowland, and Littoral forms of plant life, as each presses towards the region of the setting sun.

When at last the Arctic-alpines were forced up our mountain sides, they were completely cut off from the Arctic-alpine flora of the Continent, and their ranks could not be recruited owing to the intervening land not offering the conditions under which the Arctic vegetation could live.

It therefore follows that the Arctic-alpines must have been the first plants that entered Britain after the last glacial period, and must have remained separated by an impassable gulf from any other Arctic forms of vegetation ever since. The whole of Britain became stocked with a new supply of plant life which had got thoroughly established, each plant having selected those sites which best suited the conditions under which it had to live; and in those situations it grew with such an amount of vitality that it was able to compete with success against all other forms of vegetation; but we must not suppose that this result was attained without many a hard struggle for existence in which the fittest survived. This settlement of the British flora had hardly been satisfactorily accomplished, when there came a convulsion of nature which we may call 'the first post-glacial period of depression,' as it resulted in the tract of land which connected Britain with the Continent disappearing beneath the waves, and the submersion of the British Isles to a height of probably 150 feet above the present sea-level. It thus drowned out to a great extent the Littoral and Lowland flora, and at the same time altered the conditions under which the Arctic-alpine, alpine, and sub-alpine flora had to live. For, the climate becoming more humid from the surrounding sea, a number of plants which required a dryer climate with greater extremes of heat and cold must either have been killed off, or must at least have been modified to suit the altered conditions. There being more moisture in the air, the extremes of both heat and cold were so moderated, that our climate became better suited for herbaceous perennials than for annuals.

This period of depression was followed by 'the second post-glacial period of upheaval,' which is not supposed to have elevated the land to such a high point as 'the first post-glacial period of upheaval,' but which was sufficiently great to connect Britain to the Continent by a land attachment somewhere in the neighbourhood of the present Straits of Dover, and also to give to Ireland a land attachment with Great Britain. This afforded an opportunity for another migration of Littoral and Lowland plants into Britain, which gradually spread west and north from the point where they reached our country. As far as we can judge from our present knowledge, this period of upheaval was not of long duration, and was succeeded by 'the second post-glacial period of land depression,' which ended by Scotland and other parts of the British Isles attaining the levels at which they have since remained. The existing British flora may be described in the main as Germanic, since it mostly came during 'the first post-glacial period of upheaval,' when we had a land attachment with Germany. Though insular, the British flora resembles too strikingly that of the Continent to mistake the source from which our islands derived their plant life, as we want the endemic or peculiar types which characterise 'Oceanic' islands.

THE PRESENT FLORA OF SCOTLAND.

The ultimate result of this struggle in which the fittest survived, some of them in a modified form so as to suit changed conditions, was, that we have now in Britain 1425 species, or, including sub-species, about 1680.

Of these we have in England 1357 species and 103 sub-species; and in Scotland 1055 species, or, including sub-species, 1259. The totals for Scotland are made up as follows:

Native Species undoubted,	937
Native Species doubtful,	29
Alien Species introduced by man,	89
Native Sub-species,	204
Total,	1259

The native species and sub-species combined include 409 genera, and the introduced or alien species 38 genera, not included in the above. The whole of these plants belong to 86 natural orders—80 of them including native plants, and the remaining 6 being entirely represented by a few of the plants which man introduced, and which have become wild. The following is an enumeration of the natural orders referred to:

Natural Orders found in Scotland.

1. Ranunculaceæ.
2. Berberideæ.
3. Nymphæaceæ.
4. Papaveraceæ.
5. Fumariaceæ.
6. Cruciferæ.
7. Resedaceæ.
8. Cistineæ.
9. Violarieæ.
10. Polygalaceæ.
11. Caryophyllaceæ.
12. Portulaceæ.
13. Elatinaceæ.
14. Hypericinaceæ.
15. Linaceæ.
16. Malvaceæ.
17. Tiliaceæ (introduced).
18. Geraniaceæ.
19. Aceraceæ (introduced).
20. Celastraceæ.
21. Rhamnaceæ.
22. Papilionaceæ.
23. Roseaceæ.
24. Onagraceæ.
25. Lythrarieæ.
26. Cucurbitaceæ.
27. Crassulaceæ.
28. Ribesiaceæ.
29. Saxifragaceæ.
30. Umbelliferæ.
31. Araliaceæ.
32. Loranthaceæ.
33. Cornus.
34. Caprifoliaceæ.
35. Stellatæ.
36. Valerianeæ.
37. Dipsaceæ.
38. Compositæ.
39. Campanulaceæ.
40. Ericaceæ.
41. Primulaceæ.
42. Lentibulaceæ.
43. Aquifoliaceæ.
44. Jasminaceæ.
45. Apocynaceæ.
46. Gentianaceæ.
47. Polemoniaceæ.
48. Convolvulaceæ.
49. Boraginaceæ.
50. Solanaceæ.
51. Orobanchaceæ.
52. Scrophularineæ.
53. Labiatæ.
54. Verbenaceæ.
55. Plumbagineæ.
56. Plantagineæ.
57. Paronychiaceæ.
58. Chenopodiaceæ.
59. Polygonaceæ.
60. Thymeleaceæ (introduced).
61. Elæagnaceæ (introduced).
62. Aristolochiaceæ (introduced).
63. Euphorbiaceæ.
64. Empetraceæ.
65. Ceratophyllum.
66. Urticaceæ.
67. Ulmaceæ.
68. Amentaceæ.
69. Coniferæ.
70. Typhaceæ.
71. Aroideæ.
72. Lemnaceæ.
73. Naiadeæ.
74. Alismaceæ.
75. Hydrocharideæ.
76. Orchidaceæ.
77. Irideæ.
78. Amaryllideæ (introduced).
79. Liliaceæ.
80. Juncaceæ.
81. Restiaceæ.
82. Cyperaceæ.
83. Gramineæ.
84. Lycopodiaceæ.
85. Equisetaceæ.
86. Filices.

THE SCOTTISH ALPINE FLORA.

In Scotland, owing to the altitude of our mountains being greater than those of England, Wales, and Ireland, we have a much more extensive Arctic-alpine flora. The combined flora of the United Kingdom comprises only 91 species of Arctic-alpine plants, and of these 88 are natives of Scotland; so that of the whole British flora of Arctic-alpines, only three species are absent. The first, *Gentiana verna*, is found among the mountains of West Yorkshire, Durham, Westmoreland, and Cumberland, and the hills of Galway, Mayo, and Clare in Ireland. The centre from which this plant has been distributed is the European Alps. The second, *Lloydia Serotina*, is found on the mountains of Carnarvonshire in Wales. A small bulbous plant with white flowers, it has an extensive distribution, being found on rocky mountains in Northern and Arctic Europe, Asia, and America, as also on the high mountain ranges of Europe, the Caucasus, and Altai. The third, *Saxifraga umbrosa*, or London Pride, has the south-western Irish hills as its only British station. It is one of those plants designated by the late Mr Hewett Cottrell Watson, the author of *Topographical Botany*, as Asturian, from its nearest native habitat to Britain being the mountains of Asturia.

Of the 91 British Arctic-alpine plants, 45 are natives of England and Wales, while only 25 are natives of Ireland. If we examine the lists of the flora of Arctic Europe, we find that, with the exception of about half a dozen species, all these 91 plants are found there; and if we travel further north to the Polar regions, we find nearly 50 of these species, or more than half the British Arctic-alpine flora, growing near the sea-level.

In Scotland the Grampian range may be considered the centre of the distribution of our Scottish Arctic-alpine flora, and there are two principal localities in that range at which we find a very large representation of species, namely, the Breadalbane mountains in Perthshire, and the Caenlochan and Clova mountains in Forfarshire. We find 73 out of the 88 species that are met with in Scotland in each of these counties. We also meet with a fair representation of species on the mountains of the Braemar district; but as we go to the south-west we find a gradually decreasing number of varieties of Arctic-alpines, the primary cause, in all probability, being that the plants do not find suitable soil. In chains of mountains, such as those we have mentioned, where so many high peaks are so closely contiguous, there appears to be no satisfactory reason why our Arctic-alpine flora should not spread westwards to the mountains that exist on the coast of our western mainland; but it is worthy of remark that those mountains where the rock consists of mica schist are the stations where we find the largest representation of Arctic-alpine species, while on those mountains where the rocks are granitic, only a few species seem able to find a home. When we bear in mind the effects of the weather in disintegrating the rocks, it is easy to understand how the laminations of the mica schist are split open by the frost and rapidly reduced to a rich soil, while the granitic

rocks, from their structure, are comparatively little affected by such changes of temperature. With such a large rainfall as our mountains are subjected to, it takes a large supply of the disintegrated material to supply the place of the large quantities of *detritus* that are being continually washed down into the valleys.

The Scottish Arctic-alpine flora is specially interesting, for, in proportion to the number of species represented, it contains a far greater number of our rarest British plants than either the sub-alpine or Lowland zones. It may not be uninteresting to enumerate the names of some of those plants, and the localities in which they exist. *Lychnis alpina* is only found in Britain on the top of Little Culrannoch in Clova, but a variety of this plant is also found at one station in England, namely, Hobcarten Crag in Cumberland. *Oxytropis campestris* has only one British station, which is on a hillside in Clova, at an elevation of 2000 feet. It does not spread, and appears to confine itself to a limited area. *Astragalus alpinus* is found growing on the summit of a cliff on Craig Mad in Clova, and in the Braemar district on Little Craigendall; these are its only British localities. *Mulgedium alpinum* is met with in ravines in Caenlochan and Clova, and on Lochnagar. Most Arctic-alpines are dwarf plants, but this one is an anomaly to the general rule, as it grows from 2 to 3 feet high. *Gentiana nivalis* grows in Britain only in Caenlochan, on Camcreag, and Ben Lawers. *Menziesia cærulea* has the Sow of Athole as its only British station. *Myosotis alpestris*, Alpine Forget-me-not, has Ben Lawers in Perthshire and Micklefell in Teesdale as its only localities in Scotland and England. *Saxifraga cernua* is found growing near the summit of Ben Lawers, which is its most southerly station in Europe.

There are numbers more of very rare British plants among our Arctic-alpines, but the above will enable the reader to realise to some extent their rarity. Every plant must be surrounded with the conditions that are congenial to it to enable it to live, and if these are withdrawn, it will soon die. There are so many distributive agencies constantly at work that there can be no doubt that the seeds of those plants are spread over a wide area, but the stations where the seed finds the necessary conditions to enable it to grow and to develop into the mature plants are so few and far between, that some Arctic-alpine plants have only one, two, or three stations in the whole of Britain. What we have said regarding the distribution of the seed in suitable localities for growth, applies to the sub-alpine and Lowland vegetation as well as the Arctic-alpine, though the latter, perhaps, affords for our purpose the best illustration, as it is much more restricted with regard to the area over which the conditions suitable for the growth and development of its plant life occur. In the sub-alpine and Lowland zones suitable stations for the depositing of the seed with a likelihood of its coming to maturity are much more numerous, and the modes of dispersion are also increased, but even in these zones some plants are found that are exceedingly rare and local in their distribution.

THE DISPERSION OF PLANT LIFE IN SCOTLAND.

The agents in the dispersion of seeds are various, but perhaps the most important is the wind, which, as it sweeps across Scotland, must carry with it inland and scatter broadcast over the country the seeds of many plants from the seashore. At the same time the seeds of many inland plants are conveyed to new stations, where, unless the surroundings among which they are deposited are suitable for their growth, they soon lose vitality and die. The agency that comes next in order of importance is that of animals and birds. These convey seeds in one-seeded fruits, which have become attached to their hair or feathers by means of hooks or prickles, or sticky surfaces. They also swallow fruits, the seeds of which pass through their intestines uninjured, and are almost always evacuated at some distance from where the fruit was procured. Wading birds, it has been remarked by Darwin, carry on their feet to considerable distances the seeds of plants growing in shallow water, which have been deposited in the mud. Water is another agency, but, except in the case of the seeds of aquatic plants, its dispersive power is limited almost entirely to the carrying down to lower levels of the seeds of plants that happen to fall into streams.

Another dispersive force is the elastic dehiscence of the seed-vessel or of the seed-coat, by the former of which the seeds of the broom are thrown some distance, by the latter those of the wood-sorrel. Awns, too, attached to the glumes or bracts that cover the ovaries of some grasses, are so acted upon by wet or dry weather that they propel themselves forward. They can only move in one direction; but still in this way seeds may be pretty widely dispersed.

THE INTRODUCTION OF FOREIGN PLANTS.

There are numerous agencies at work continually introducing alien plants into our country, and some of these plants, from their great power of adapting themselves to altered circum-

stances of climate and soil, have become thoroughly established, such as *Anacharis Canadensis* and *Mimulus luteus*. With our large imports of raw materials for manufacture, it could hardly be otherwise. Wool, jute, Esparto grass, and other similar products bring their quota of foreign seeds; and to our exports we are also indebted for a portion of our flora. This may seem rather extraordinary, but to procure a cargo many a ship has to come to our ports in ballast, and in ballast there are generally many seeds of plants unknown in our island. If such ballast be delivered during genial summer weather, it generally happens that ere long strange plants begin to make their appearance at the places where it is deposited. Ballast is often used to level up new streets and public pathways, and wherever it has been laid down rare plants may be looked for. Numerous instances of foreign plants being discovered under such circumstances might be mentioned, but one will suffice. A few years ago there was deposited, at various places in and around Edinburgh, ballast obtained from a vessel that had arrived at Leith from the Mediterranean, and the following autumn, at each of these places, there flowered a plant which was a stranger to our flora, and excited much interest among some local botanists, as it was understood to be confined to the south of Europe and Northern Africa. Inquiry led to the discovery of how it had been introduced, but it only came up the one season, being unable to live through our winter months.

EFFECTS OF OCEAN CURRENTS.

Ocean currents bring to our coasts the seeds of foreign plants, and some of these come from distant countries. On the West of Scotland, where the warm waters of the Gulf Stream lave our shores, American seeds and vegetable products are continually being cast up, and it is probably to the same current we owe the presence of a small number of American plants that have become established in the West of Scotland and Ireland, such as *Eriocaulon septangulare*, and that rare moss *Myurum hebridarum*. It is somewhat remarkable that the seeds of plants that must have been floating in the sea for a considerable length of time should retain their vitality, and this has apparently led such an eminent authority as Dr Stirton to suggest (*Notes on the Fauna and Flora of the West of Scotland*, p. xxix.) that possibly there may have been at one time a land connection 'along the great mid-Atlantic ridge,' by which may have come the American plants we find growing on the West of Scotland. We doubt if there are good grounds for this supposition, as without our humid climate these plants would not thrive or even live, and without the Gulf Stream there would not be this humidity; and if our country ever was attached to America since the last glacial period by 'the great mid-Atlantic ridge,' it is almost certain that the Gulf Stream would not then have broken upon our shores, and that our climate would have been much colder than it is at present.

WHAT WE KNOW OF THE PRESENT DISTRIBUTION OF PLANT LIFE IN SCOTLAND.

Let us now endeavour to ascertain what is the existing knowledge regarding the distribution of the plant life of Scotland. Perhaps this may serve a double purpose, as, besides giving information, it may lead botanical workers to note the flora of their own districts, and to send their lists of plants to the keeper of the Kew Herbarium, who will put their observations on record.

It is to the late Mr H. C. Watson that we owe the scientific treatment of this study, and it is from the latest and posthumous edition of his *Topographical Botany* (1883), that we have obtained the following information. The statistics have taken some trouble to prepare, as it has necessitated an examination of lists that give between 20,000 and 30,000 different localities for Scottish plants. Mr Watson divides Scotland into six provinces (numbered XIII. to XVIII.), thirteen sub-provinces (numbered XXVI. to XXXVIII.), and forty counties and vice-counties (numbered 72 to 112). These districts are mostly counties, but large counties have been sometimes subdivided, and small counties are in several instances incorporated with adjoining Watsonian districts. In subdividing the counties, the natural features of the country were considered, and lines that were well defined on maps, or could be easily discovered on the ground, were, as far as possible, chosen—such as watersheds, roads, rivers, canals, etc., but for accurate work the student will require to consult a Watsonian map, such as is found in most of Mr Watson's works.

In considering the counties and vice-counties, we begin at the south of Scotland, and gradually proceed northwards until we reach the Shetland Isles, attaching to each district the Watsonian number. The following calculations include both species and sub-species. Where our information has enabled us, we have sometimes added a plant to the lists as *certain* where

Mr Watson has put it down as *doubtful;* otherwise we have adhered to the lists as closely as possible. It, however, may be better to consider that the number of plants given is not absolutely exact, but as near the correct number as we have been able to determine.

Watsonian Number.	List of Counties and Vice-Counties.	No. of Plants recorded.
72.	Dumfries, county of,	471
73.	Kirkcudbright, county of,	491
74.	Wigtown, ,,	100
75.	Ayr, ,,	645
76.	Renfrew, ,,	597
77.	Lanark, ,,	648
78.	Peebles, ,,	321
79.	Selkirk, ,,	447
80.	Roxburgh, ,,	607
81.	Berwick, ,,	716
82.	Haddington, ,,	581
83.	Edinburgh, ,,	766
84.	Linlithgow, ,,	466
85.	Fife and Kinross. These two counties form this Watsonian vice-county,	785
86.	Stirling, county of,	543
87.	West Perth with Clackmannan. This vice-county includes the southern portion of the county of Perth, and the whole of the county of Clackmannan,	615
88.	Mid Perth. This vice-county comprises Central Perthshire,	667
89.	East Perth. This vice-county comprises Northern Perthshire,	599
90.	Forfar, county of,	801
91.	Kincardine, county of,	601
92.	South Aberdeen, a vice-county, which comprises the southern half of Aberdeenshire,	705
93.	North Aberdeen, a vice-county, which comprises the northern half of Aberdeenshire,	472
94.	Banff, county of,	524
95.	Elgin, ,,	573
96.	Easter-Ness. There is comprised in this vice-county the north-eastern half of Inverness-shire, and the whole of the county of Nairn,	552
97.	Wester-Ness. This vice-county is the western portion of the county of Inverness on the mainland,	289
98.	Argyll. This vice-county is the central portion of the county of Argyll on the mainland,	381
99.	Dumbarton, county of,	468
100.	Clyde Isles. This vice-county comprises Bute, Arran, Cumbrae, and other Isles in the Firth of Clyde between Cantyre and the coast of Ayr,	604
101.	Cantyre, the peninsula of the same name,	418
102.	South Ebudes. The islands comprised in this vice-county are Islay, Jura, Gigha, Scarba, Colonsay, Oronsay, and the smaller isles adjoining,	462
103.	Mid Ebudes. This vice-county comprises the islands of Mull, Coll, Tiree, with the islands that adjoin them,	414
104.	North Ebudes. The islands that form this vice-county are Skye, South Rona, Raasay, Scalpa, Canna, Rum, Eigg, Muck, and the smaller isles in their vicinity,	385
105.	West Ross. This extensive vice-county comprises the western portions of Ross and Cromarty,	185
106.	East Ross, a vice-county formed by the eastern part of Ross and Cromarty,	458
107.	East Sutherland, as its name denotes, a vice-county formed by the eastern part of Sutherlandshire,	184
108.	West Sutherland, the western portion of Sutherlandshire,	373
109.	Caithness, county of,	449
110.	Hebrides. This vice-county is the Long Island or Outer Hebrides,	311
111.	Orkney, the group of islands of the same name,	429
112.	Shetland, the group of islands of the same name,	338

These statistics will enable the reader to form an idea of the districts of Scotland that still offer the best fields for botanists, and it cannot fail to strike attention that in several localities much remains to be done. However, the work that has been accomplished during the last ten years gives encouragement to hope that during the next decade such districts as Wigtownshire, East Sutherland, and Peeblesshire will have their floras much better recorded, and also that our general knowledge of Scottish Botany will be greatly advanced. It is, however, gratifying to know that, from a botanical point of view, Great Britain has been better worked than any other part of the world—a fact that should only incite British botanists to fresh effort, as we are nearest that point when accurate general conclusions can be arrived at with regard to many phytological problems.

IX. FISHERIES.

By James G. Bertram, author of the *Harvest of the Sea*, etc.

When it is stated that fish of the value of more than £3,250,000 are annually captured in what may be termed the seas and rivers of Scotland, or are obtained by boats and crews sailing from Scottish ports to other waters, the great importance of the Scottish fisheries at once becomes apparent, not only because of their vast contribution to the national commissariat, but also because of the money expended in the construction of harbours, the building of boats, the manufacture of sail-cloth, the weaving of nets, the making of barrels, and the transmission of the fish caught to the various centres of consumption. Scotland, from an early period in its history, has made its mark on the waters, and has during late years been foremost in its endeavours to secure a large share of the 'harvest of the sea.'

THE HERRING FISHERY.

The chief food-yielding fishes are plentifully found off the Scottish coasts, on many points of which important fishery centres have long been established; but the particular fish which from time immemorial has been most eagerly sought for, and most plentifully found, in Scottish waters, is the herring—the capture of which throughout Scotland has during many years been a well-organised industry, and is at present yielding a sum of over £2,000,000 sterling per annum to Scottish fishermen.

Although the natural history of the herring has at all times attracted attention, it is only within the last few years that definite knowledge has been obtained of its growth and habits. It is a fish which breeds and lives in our immediate seas in vast numbers, the herrings of different localities being easily distinguishable from each other. Pennant's story of the annual migration of the herring to and from the Arctic seas has long since been proved a myth, founded probably on the speculations of ignorant fishermen. The herring is not migratory farther than that it approaches the land in search of suitable spawning ground; and it is then that it becomes the prey of the fishermen. It is very prolific, the female yielding from 25,000 to 35,000 roe or eggs, so that Buffon observed that, if one pair were suffered to breed and multiply for a period of twenty years without interruption, their progeny would in that time bulk as large as the globe itself.

From official statistics annually collected by the Scottish Fishery Board since 1st June 1809, we are able to ascertain with some precision the quantities of herring which are annually cured or salted. For the season ending on 5th April 1810, the number of barrels entered as cured was 90,185½, of which 35,848 were exported to Ireland and to places out of Europe. No note was apparently taken of the number of barrels exported to the Continent in 1810 and 1811; but since then the figures have been regularly published. The export of cured herrings to the Continent has increased from 4730 barrels for the year ending 5th April 1812, to 863,644½ barrels in the year ending 31st December 1883. The following tables show the growth of the herring fishery in Scotland during the present century, the statistics of every tenth year being selected for that purpose:—

Year ending 5th April	1812,	111,519½ barrels cured.	62,820 barrels exported.
,, ,,	1822,	316,524¼ ,,	214,956 ,,
,, ,,	1832,	362,660¾ ,,	217,499¾ ,,
,, ,,	1842,	667,245¼ ,,	284,736 ,,
,, 5th Jan.	1852,	594,031 ,,	264,204 ,,
,, 31st Dec.	1862,	830,904 ,,	494,910 ,,
,, ,,	1872,	773,859½ ,,	549,631 ,,
,, ,,	1882,	1,282,973½ ,,	825,982¾ ,,

[Note.—The following are the places to which herrings caught and cured in Scotland are exported in the greatest numbers:—Libau, Königsberg, Danzig, Stettin, and Hamburg.]

The total number of barrels of herring cured in Scotland during the ten years ending in 1883 has been as follows:—

1874,	1,000,561 barrels.	1879,	841,796 barrels.
1875,	942,980 ,,	1880,	1,473,600½ ,,
1876,	598,197½ ,,	1881,	1,111,155¼ ,,
1877,	847,718¾ ,,	1882,	1,282,973½ ,,
1878,	905,768 ,,	1883,	1,269,412½ ,,

Most of the herrings cured in Scotland are exported to the Continent, as is shown by the

following table, which gives the total number of barrels exported to Ireland, the Continent, and places out of Europe:—

	Ireland.	Continent.	Out of Europe.	Total.
1874, . . .	28,137½	706,967¾	2209¾	737,314¾
1875, . . .	33,434	624,137½	3399	660,970½
1876, . . .	20,333	378,740	1350½	400,423½
1877, . . .	16,085½	543,908¼	1992	561,985¾
1878, . . .	17,445¾	608,969¼	2519	628,934
1879, . . .	8,857½	536,380½	755½	545,993
1880, . . .	32,482½	976,300½	1028½	1,009,811½
1881, . . .	33,459¼	711,488	972½	745,879¾
1882, . . .	40,377	782,576¼	3029½	825,982¾
1883, . . .	25,870	863,644½	1246	890,760½

No official figures denoting the quantities of herrings sold *fresh* were formerly collected; but in 1833 an attempt was for the first time made to ascertain the extent of trade carried on in this branch of the herring fishery. The statistics have been taken at each of the twenty-six fishery districts (a list of which is given on p. 73) superintended by officers of the Scottish Fishery Board. The sale of herrings, as taken from the water, is placed at 114,887 *crans* (the cran is a measure which holds forty-five gallons of ungutted herrings), and the value of the catch is set down as £149,433. The cured herrings of 1883 are valued at £1,904,118, 15s., making for both a grand total of £2,053,551, 15s. Counting the cran as a barrel, and estimating the contents of each barrel at 800 individual fish, the total number of herrings captured in Scotland during the year 1883 would be 1,107,439,200. At the price of ½d. each, the sum which that number of fish should realise would be £2,307,165.

The 'curer' has always been more or less the moving spirit of the herring fishery in Scotland, and is so still, although commerce in salted herrings is evidently on the eve of a change, in consequence, probably, of the growing demand for the newly-caught fish, which are now more easily conveyed to towns and cities than was the case sixty years since. The curer contracts with the owners of boats to fish for him, at one or other of his curing places, if he possess more than one; he usually stipulates that the owner of the vessel shall supply him with 200 crans of fish. One curer may have any number of boats fishing for him, at a sum agreed upon for each cran of fish; he also, in some instances, provides the boat with several requisites of the fishery, as, for instance, dye stuff for the nets, probably also the nets as well. He likewise, as a rule, provides ground upon which the nets may be hung up to dry at each return from the fishery. In addition to a given sum to be paid for every cran of herrings, the curer is called upon to pay, on the making of the engagement, a sum of ready money by way of 'bounty,' as also a trifle in the way of 'arles,' or hiring money. The engagements for the fishing are usually made many months in advance of the period at which the fish can be caught; at the close of one season, indeed, the engagements for the next begin to be made—long before it can be known that there will be any herrings to capture.

The entire fabric of herring commerce, as at present conducted, rests on the shoulders of the curer. He engages a staff of coopers to make his barrels; he imports his barrel wood, and provides the salt; he engages and pays a large number of herring-gutters and packers; he obtains the 'brand' for his fish, and enters into relations with the 'buyers,' some of whom come from great distances to purchase at the Scottish curing ports; and, after all his calculations and never-ceasing industry, he has no certainty of making a profit. One of many circumstances may occur to mar his efforts. The season's fishery may prove a failure, and his outlays in bounties may thus be unprofitable; his barrels and salt may be left on his hands; or it may prove too productive, so that markets become glutted, and prices fall below the point of remuneration. Taken throughout, the venture partakes greatly of the character of a lottery as well to the curer as the fishermen.

The Scottish fishermen are mostly hereditary 'toilers of the sea,' some families having followed the calling through many generations. Many of the boats are 'concerns,' owned by several relatives, all of whom share in the venture; in other instances the boat belongs entirely to one person, who may act himself as skipper, hiring as many 'hands' to assist him as he may require, paying them either by share, or at a rate agreed on. Some boat-owners do not now contract with any particular curer, but prefer to sell their fish as they capture them; by doing so they frequently obtain a better return for their labour. The 'craft' engaged in this branch of the Scottish fisheries have of late years been enlarged and improved. Formerly open boats were the rule, and a number of these are still used; but the new vessels are generally of a larger build, most of them decked or half-decked. The boats of the period, with all necessary fittings, cost from £150 to £300, whilst a large sum of money requires to be expended in providing nets, which cost about £3 each. The larger vessels have proved

most successful, the superiority of big boats over small ones having been demonstrated day by day. There is, however, one drawback to these larger vessels: many of the harbours cannot take them in, and when becalmed they are too heavy to be propelled by oars, so that there is great danger of the cargo of herrings not reaching the port in time to be cured. In such cases steam tugs are sometimes sent out by the curer to aid his boats, and the time is not distant, probably, when steam-driven boats will become a feature of the herring fishery.

The herring, it may be said, can only be captured when it comes in search of its captors. In other words, the shoals are only accessible to man at those periods when the fish assemble in countless numbers to spawn; and it is a feature of the fishery that the official 'brand' or mark of quality is only allotted to 'full' fish, that is, those herrings which are full of their spawning material, although at that time the food qualities of the fish are at their poorest, all the fat-forming products having been drained away to aid in the development of the milt and roe. The herring fishery in Scotland is chiefly a shore fishery, the boats putting off to sea in the afternoon, and returning with their cargoes of fish as early next day as possible, so that the cure of the herrings may at once be proceeded with. Some vessels have always, however, carried on the cure on board in the Dutch style, and others have recently been fitted out to carry on fishing in a similar fashion. The mode of catching the herring common to the fisher-folks of Scotland is known as drift-net fishing. A series of nets are joined together on a long rope, each net being marked by a floating bladder, and the united fabrics are let down into the water, into which they are sunk by a leaden weight. Thus the nets stand, so to speak, across the path of the fish like a great perforated wall; and the herrings, should they strike against it, are enmeshed by their gills. When all the nets carried by a boat have been placed in the water, the men go to rest for a few hours, and leave the nets to drift with the tide, in the hope that when it is time to pull them on board they will be filled with fish. Herring fishing while it lasts is a laborious occupation, as on some evenings the nets have to be shot more than once. There is another mode of fishing for herrings in Scotland which is chiefly practised in Loch Fyne; locally it is known as 'trawling,' but in reality it is 'seining'—a plan of capture which is peculiar to pilchard fishing off the coast of Cornwall. By it the fish are surrounded with nets, and landed at leisure.

The following is a list of the Scottish fishery districts, as arranged by the Fishery Board:

Aberdeen.	Campbeltown.	Fraserburgh.	Leith.	Montrose.	Shetland.
Anstruther.	Cromarty.	Greenock.	Lochbroom.	Orkney.	Stonehaven.
Ballantrae.	Eyemouth.	Helmsdale.	Lochcarron.	Peterhead.	Stornoway.
Banff.	Findhorn.	Inveraray.	Lybster.	Rothesay.	Wick.
Buckie.	Fort William.				

The herring fishery, however, is carried on from numerous places other than the above-named towns—wherever a curer may set up business, or at any little port which is near a railway station. Wick was at one time the Scottish headquarters of the fishery, but of late years Fraserburgh and Peterhead have become important centres, the aggregate number of boats fishing from the three Aberdeenshire districts of Aberdeen, Fraserburgh, and Peterhead during the season of 1883 being 2056. It has been calculated by R. W. Duff, Esq., M.P., that the herrings taken every year off the Aberdeenshire coast are of greater value than the annual rental of that county. A very great number of herrings are now obtained at Shetland. In 1874 the inspector wrote of the Shetland herring fishery that it had become so small in mark as scarcely to call for notice, and during that year the fishing throughout the whole of the Shetland Islands yielded only a total of 1100 barrels; but in 1883 the catch of herrings for Shetland had increased to 256,487 barrels, or nearly a fourth of all the herrings (1,047,905¾ barrels) taken on the East coast of Scotland. The number of boats which fished for herrings at Shetland in 1883 was 792, being 420 more than in the preceding year. In 1883 the four herring fishery districts which produced the largest number of barrels of fish cured on shore were Shetland, 256,487; Fraserburgh, 192,827½; Peterhead, 181,434; and Wick, 155,668 barrels. The number of barrels cured on board vessels fitted out for the purpose was 41,899½. As regards the number of boats taking part in the herring fishery of Scotland, it cannot be given with accuracy; but the fishery officers during a selected week for each district count the vessels at work, and in that week in 1883 it was found that 8272 were engaged. On some evenings a very small number only of the fleet venture to sea, and it is only on rare occasions that the total number of vessels taking part in the fishery in any one year is to be found at work. The netting employed in the capture of the herring has of late been largely extended, and is now made of finer materials than thirty or forty years since. From an official Report on the herring fisheries of Scotland, published in 1878, we ascertain that 'Twenty years ago a boat carried 24 nets made of hemp, each net 40 yards long, with 28 or 29 meshes to the

yard, 10 to 12 score meshes deep, and weighing 25 lbs. Each boat carries now 50 to 60 nets made of cotton, each net 60 yards long, with 35 meshes to the yard, 18 score meshes deep, and weighing 12 to 14 lbs. A boat, in other words, used to carry 960 yards of netting; it now carries 3300 yards. The nets used to be about 6 or 7 yards, they are now about 10 yards, deep. They used to present a catching surface of 3000 square yards; they now present a catching surface of 33,000 square yards. The 6000 square yards of hemp netting used to weigh about 600 lbs.; the 33,000 square yards of netting now weigh little more than 600 lbs. Without increasing the weight of nets to be worked, each boat has increased its catching power fivefold. There are more than 7000 boats in Scotland fishing for herrings. These boats must, in the aggregate, have nets 23,000,000 yards long, and certainly, in the aggregate, 230,000,000 square yards of netting. The Scotch herring nets would, in other words, reach in a continuous line for nearly 12,000 miles, and cover a superficial area of 70 square miles; they would go more than three times across the Atlantic from Liverpool to New York.'

The 'brand' or mark, which denotes, on the authority of the fishery board, the various qualities of the herring cured, was never at any time compulsory, but its being conferred at all gave rise to so much discussion in Parliament and in other places that a compromise was effected; and since the year 1859 a fee of fourpence per barrel has been charged on all herrings distinguished as cured to the satisfaction of the board. The revenue resulting from the brand is considerable, and amounted in 1883 to a sum of £7850, 12s. 6d., thus showing that the brand is greatly valued as a certificate of quality. The number of barrels so certified during the seven years ending in 1883 may be here tabulated, along with the total number of barrels cured.

	Total Cured.	Number Branded.
1877,	847,718¾	397,795
1878,	905,768	456,708
1879,	841,796	342,323
1880,	1,473,600¼	689,286
1881,	1,111,155¼	494,182½
1882,	1,282,973½	462,612½
1883,	1,269,412½	470,995½

Besides the fishermen who capture the herrings, a numerous body of persons is required to carry on the business of curing, which, as has been indicated, requires to be effected with great celerity. In the Aberdeen district 6876 gutters and packers are employed, most of them females, in addition to 957 coopers, 811 labourers, and 13,017 fisher men and boys, making a total of 21,661 persons who obtain remunerative wages for the few weeks of the fishing.

The herring fishery in Scotland was originally of slow growth, and no date can be fixed upon to indicate its origin; but that the herring was in Scotland an article of commerce at a very early date is proved by David I.'s Charter to the Abbey of Holyrood (1138), in which leave is given to fish for herrings at Renfrew on the Clyde. In the year 1240, herrings are mentioned in the Parliamentary Records of Scotland in connection with the burgh tallies. The Scotch, says Mitchell in his *History of the Herring*, seem at a very early period (1410) to have asserted their claims to the exclusive rights of fishing on their own coasts; by the year 1424 herrings were regularly salted and barrelled in Scotland as well as smoked. Five years later, we are told, the fishing was carried on to a large extent, and that Scottish fishermen caught great quantities at the mouths of the Dee, Tay, Forth, Tweed, etc., which they principally sold to the Dutch and other foreigners. In the reigns of James III., IV., V., and VI., various laws were enacted for the regulation of the herring fishery, some of which were rather objectionable. The aid of Parliament, from those times to the present day, has often been extended to the herring fisheries, which were at one time encouraged by bounties. These, however, have long since been abolished, the only remnant of Governmental aid which now exists being the 'brand.' It may be said of the Scottish herring fishery that it prospers best when those engaged in it are undisturbed by vexatious rules and regulations.

The Sprat Harvest, which may be held to be a branch of the herring fishery, would prove very remunerative to the Scottish fishermen if they were able to get their takes conveyed to market at a reasonable rate of carriage, but in consequence of the heavy charges of the railway companies, it has not been found profitable to send these toothsome fish to distant seats of population, where they would be gladly welcomed as a palatable addition to the commissariat. The taking of sprats in Scotland used to be largely carried on in the Firths of Forth and Tay and in the Beauly Firth at Inverness. In 1883 the gross catch is stated to have reached 43,428 crans, of which about equal quantities were got in the Firth of Forth, the Firth of Tay, and the Moray Firth. A very large quantity of the sprats taken, more

especially in the Tay, could not unfortunately be utilised for food, and was therefore disposed of for manure, whilst a small quantity was utilised for bait. Mr R. W. Duff, M.P., in his lecture on 'The Farther Development of Our Sea Fisheries,' gave the following figures illustrative of the sprat trade :—53 barrels consigned to London realised a sum of £19, 18s. 6d. ; the railway charged £15, 13s. 3d. for carriage ; porterage cost £1, 6s. 6d.; whilst the salesman's commission amounted to 19s. 9d., so that the nett proceeds of the 53 barrels only came to £1, 19s. Seven crans of sprats weigh a ton, and a ton contains 73,000 fish, which is at the rate of about 32 to the pound. There are thousands of persons who would be glad to buy sprats if they could obtain them, but, as has been stated, the heavy freight charged prevents their being utilised for food.

THE COD, LING, AND HADDOCK FISHERY.

In addition to the herring and the sprat, the chief fishes captured in Scotland belong to the cod and turbot families—the *Gadidæ* and *Pleuronectidæ*. These yield some of their members in positively enormous numbers, the haddock, in particular, being annually captured in millions, whilst the whiting is also a most abundant fish. The cod and its congeners—the ling, tusk, and hake—are also plentifully caught; whilst the toothsome 'flukes' reach the frying-pans of the people in countless numbers—the turbot and sole being taken also on many parts of the coast. No formal organisation exists in Scotland for carrying on the white-fish fisheries, and, with an exception afterwards noted, no statistics of the capture of cod, ling, haddock, whiting, turbot, or other flat fish are collected. As has been indicated, the herring fishery occupies the larger portion of the time of the Scottish fishermen, a very great number of the fishing population preferring to devote the largest share of their attention to that particular fish, following the different shoals in their season, many of them fishing both in Irish and English waters. In the winter time, when some of the most coveted table fishes are in their best condition for food, the herring-boats at many of the Scottish fishing ports are laid up (there is, however, at several places a winter herring fishery), and the line-fishing boats are brought into use. Bait being obtained, the voyaging in search of cod and haddock is commenced. It is a laborious occupation; the first baiting of the lines is, however, usually accomplished by the females before the boat leaves port. At one period the family of the fishermen used to collect mussels for bait on the immediate shore where these mollusks were plentiful, but these local supplies have long since become exhausted, in consequence of the great quantities used, and now mussels have to be purchased from private beds at a considerable expenditure, the men having to proceed on many occasions to distant places in order to obtain the necessary supply, or otherwise have them brought by railway, which is somewhat costly, the rates of carriage being heavy. As indicative of the quantities of bait required in line-fishing, it may be stated that on the Berwickshire coast as many as 12,000,000 limpets are annually used for bait when such a number can be obtained. For the winter haddock fishery carried on from the port of Eyemouth, from 700 to 1000 tons of mussels are required, and these have to be brought from Boston in Lincolnshire at a cost, in all, of 40s. per ton. In a period extending over nine months, haddocks of the value of £13,000 were taken by the Eyemouth boats, and the cost of the bait used was £1800. A very considerable portion of the haddocks brought to Eyemouth are cured for distant markets, where they find a ready sale, although it can scarcely be said they are in the same favour as the 'Finnan Haddies' of the Aberdeen and Banff shire coasts. At Newhaven, too, on the Firth of Forth, the number of mussels required for the deep-sea boats is at the rate of 3,500,000 per annum.

In all probability fishing by means of the beam trawl-net will, in a short time, supersede line-fishing, which is both laborious and expensive. Already there is a small fleet of steam trawlers working from off the coast of Fife to the coast of Caithness, and landing their catches of fish at various of the Scottish fishing ports, chiefly Aberdeen, Ayr, Berwick, Eyemouth, Granton, Montrose, Newhaven, Stranraer, and Wick. The fish taken are of the same kinds as are caught by the line fishermen, with the addition of some that, as a rule, can only be captured by means of the beam-trawl-net, which is made in the shape of an immense purse or pocket, many feet in length, and with a huge gaping mouth that affords ready entrance to the fish. From information published by the Scottish Fishery Board, we have been able to ascertain that the line fishermen, in spite of the large captures made by the trawlers, were successful during the year 1883 in obtaining large numbers of cod, ling, halibut, skate, turbot, etc.—haddocks, in particular, being caught in vast quantities. 'There were landed in the Eyemouth district alone no less than 95,332 cwts. of haddocks, the value of which was estimated to be £58,004.' The total value of all the haddocks caught in Scotland during the year 1883 was estimated at £340,693 sterling; and, taking the value of each haddock at one penny, the number caught would be 81,766,320. In a Report on the Scottish Herring Fisheries, a

calculation was given of the number of cod, ling, and hake supposed to inhabit the seas around Scotland and its islands. The estimate was 70,000,000, and of these it is thought that 3,500,000 would be caught for food purposes—a number, however, representing only the cured fish. As has been indicated, the line fishers nearly all fish, as it is called, on 'their own hook.' A few, however, capture by agreement with dealers; and others fish on the chance of a prompt sale on arriving in port, where buyers are always in waiting ready to bid and send off the produce to the large seats of consumption. The old Scottish system of 'creel-hawking' by the women of the fishermen up and down the country and in Edinburgh, is now greatly out of fashion.

Statistics of the cod and ling fish captured by open boats, and cured in Scotland under the supervision of the officers of the Fishery Board, are given in the annual Report, from which we find that the number cured in 1883 was 3,021,910, more than a third of them (1,190,991) being caught off the Shetland Isles. In addition to that number, 598,297 cod, ling, and hake were cured on board of the fifty-two vessels which are able to carry on the work at sea, so that the grand total was 3,620,207. The weight of the fish cured dry was 120,335¾ cwts., whilst 7310 barrels were cured in pickle. Of the total lot cured, 56,525½ cwts. cured dry were exported, chiefly to Ireland. In addition to the quantities of these fish which were captured to be cured, statistics are given in the Fishery Report for 1883 of the quantities caught for the daily markets, viz., 184,430 cwts. of cod and 28,643 cwts. of ling, the united value of these being £97,297. The estimated money value of the produce of the white-fish fisheries of Scotland to the fishermen in 1883 amounted to £757,710, but to the consumers the sum charged would probably be three times that amount. In 1883 the number of fishing boats in Scotland was 15,294; of fisher men and boys, 49,722; and the estimated value of boats, nets, lines, and other fishing materials used in the herring and cod and ling fisheries amounted to £1,654,160, being an increase on the preceding year of 321 boats and 1426 fisher men and boys, and of £181,960 in the estimated value of boats and fishing material.

THE SHELL-FISH FISHERIES OF SCOTLAND.

The value of the Scottish shell-fish gathered in 1883 has been estimated at the sum of £82,945, which is distributed as follows: Lobsters, £32,966; crabs, £19,716; mussels, £16,548; oysters and other kinds of shell-fish, £13,715. The supplies of that favourite, the oyster, have greatly fallen off, in consequence of the persistent over-dredging which at one time took place on the Firth of Forth scalps, when many hogsheads of immature oysters were sold to fatteners and other traders in Holland and Belgium, as well as to the owners of private oyster-beds in England. The quantity of oysters sold in 1883 was only 6456 hundreds —a very small number, we are led to believe, as compared with the quantities sold in former years, when the produce of the Firth of Forth oyster-beds (they are all natural scalps of great extent) would probably amount to three times the sum named, although prices would not twenty-five years ago be a third of what they are to-day. Shell-fish—oysters excepted—are found on nearly every part of the Scottish coast, and in 1883 the largest quantities of mussels and other shell-fish were obtained from the Leith, Anstruther, Montrose, Cromarty, and Greenock districts. There are mussel-beds in the Clyde and at Montrose which are private property. Enormous quantities of periwinkles are gathered at many places on the Scottish shores in order to be forwarded to London and other large seats of population. Cockles are also collected and sold in considerable quantities throughout Scotland; but it may be said with truth that shell-fish of every kind, so far as they are free to the people, are annually becoming less plentiful.

THE SCOTTISH SALMON FISHERIES.

The salmon once, it is said, was so plentiful in Scotland, that farm servants bargained not to be forced to eat it more than twice a week; but such statements must be taken only for what they are worth, and salmon are probably just as plentiful in Scotland to-day as they ever were—so far, at any rate, as the yield of the fisheries is concerned. The rivers are now watched with greater care than they were in the olden time, and although poaching prevails on the Tweed and some other streams to an extent which is not generally known, the number of fish of the salmon kind which are captured during the season in each year is probably greater, on the average, than it was forty or fifty years since. The value of the salmon captured in 1883, which was an exceptionally productive year, was estimated by the Scottish Fishery Board as £350,000. The number of fish taken is not stated, but if the figures given are compared with the average weight of the salmon as ascertained at Loch Tay and elsewhere during recent years, namely, a little over 20 lbs., and the price be estimated overhead at the wholesale rate of a shilling per pound, or at the rate of £1 sterling per fish, we arrive at 350,000 salmon as the

take in the rivers of Scotland in the year 1883. Twenty pounds in weight, we feel sure, is a fair average per fish, ranging from grilse weighing 3 or 4 lbs. to the monster captured in the river Tay (November 1883), which turned the scale at 80 lbs. Salmon of late years, it is gratifying to know, have all over increased in size; fish of from 40 to 50 lbs. having become tolerably numerous, and others of from 25 to 35 lbs. being now quite plentiful. Until 1884 no official note of the value of the salmon caught in the rivers of Scotland has ever been given, but now that an active inspector of the Scottish salmon fisheries has been appointed, the facts and figures of the salmon trade will no longer be a sealed book. The greater number of the salmon caught in the rivers of Scotland are sent to London, and in 1883 the consignment reached 34,506 boxes of (we presume, for the weight per box is not given) a hundredweight each. The consignment sent to Billingsgate in 1883 is, with two exceptions, the largest during the past fifty years; in 1835, 42,330 boxes were sent; and in 1842 the London consignment was 39,417 boxes. Of late years the consumption of salmon has largely increased throughout Scotland, and, in seasons when it is plentiful and consequently cheap, an immense number are sold. In Glasgow, on some days of July, over 300 salmon and grilse are exposed for sale.

Every river in Scotland contains, or might contain, 'fish of the salmon kind.' The chief salmon-yielding streams are the Tay, the Tweed, the Spey, the Don, and the Dee, all with very productive net fisheries. The rental of the Tay, which may be held to be the 'representative,' as it is the most valuable salmon river in Scotland, has been as follows during the eight years ending in 1883:

1876,	£19,930		1879,	£21,697		1882,	£19,221	
1877,	21,126		1880,	22,518		1883,	17,773	
1878,	21,187		1881,	19,579				

The chief commercial fisheries of the Tay are situated below the Bridge of Perth, mostly near Newburgh in the throat of the river; these are worked by means of net and coble by the lessees of the various fishing stations. A large number of persons are employed in working the different 'shots,' as the places are called where the netting of the water takes place, and a very considerable sum in wages is thereby earned on the Tay and other salmon streams. The times for fishing are regulated by Act of Parliament, angling being permitted on most rivers after net-fishing has ceased for the season. As a fact of fishery economy, it may be stated that, to admit of a rent of £20,000 per annum, fish to the value of £60,000 would require to be taken in order to meet the payment of wages and the wear and tear of the fishing gear employed, as well as to ensure the necessary profit to the lessees of the various fisheries, which, in the case of the Tay, belong to many different proprietors. Those gentlemen who own the 'upper waters,' and who afford the fish their breeding grounds, do not share in the proceeds of the commercial fisheries, but have to content themselves with an occasional day's sport with the rod. Various estimates have been made from time to time of the number of fish which ought to be captured in the Tay in any one season; these range from 75,000 to 100,000 salmon and grilse. For a period of over a quarter of a century, the river Tay has been fed with young fish from the Stormontfield salmon nursery. These fry—par and smolts—are reared on the 'piscicultural system'—the eggs of the female being exuded from the gravid salmon by pressure, and impregnated by the milt of the male fish. The fructified ova are then laid down in boxes filled with gravel, and over which a stream of water is caused to percolate. In the course of from three to four months the eggs are hatched, and twelve months later half of the number are ready to place in the Tay, the other half of the hatching, curiously enough, not being ready to migrate from the nursery till another year has elapsed. Stormontfield is now in process of being superseded by a new fish hatchery, which has been erected at Dupplin on the Earn, from which the fry will be sent into the river in about a fortnight after they have been hatched.

Great mortality has taken place in almost all the Scottish salmon streams during the years 1878-1884, in consequence of the fish being attacked by a fungoid growth (*Saprolegnia ferax*), for the cure of which no remedy has yet been discovered. It is somewhat remarkable, as has been pointed out by Professor Huxley, that, despite the enormous numbers of salmon and grilse that have fallen a sacrifice to the epidemic, the supply of these fish has not decreased, the number captured in 1883 being greater than that of many former years.

The number of boxes of salmon forwarded from Scotland and Berwick-on-Tweed to Billingsgate during the last eight years has been as follows:

	Scotland.	Berwick.		Scotland.	Berwick.
1876,	25,645	990	1880,	17,457	1293
1877,	29,366	1174	1881,	23,905	1819
1878,	27,660	1195	1882,	22,968	1412
1879,	15,374	1635	1883,	34,506	2278

SPORTING FISHERIES.

In addition to the 'angling waters' on the river Tay and other salmon rivers, there are a large number of lochs and streams in every county of Scotland on which the sport of rod-fishing may be pursued with pleasure and profit. Many of them are free to all who choose to fish; others are open to those persons who desire to enjoy their pastime more privately, on payment of a given fee for the use of boats and boatmen; and in this category we may place Loch Tay for salmon, Lochleven for trout. The rental derived from what may be described as the 'inland fisheries' of Scotland is not, we believe, less than £100,000 per annum. In connection with this branch of the Scottish fisheries, we may mention that at Howietoun, near Stirling, a large piscicultural establishment has been opened for the supply of the impregnated eggs of trout and salmon; also for the sale of 'fry' and fish of all ages. This 'fishery' has proved a great success, and has given an impetus to the study of Pisciculture in Scotland, which will probably result in the restocking of over-fished rivers and lochs, and in the establishment of new fish ponds.

X. DEER FORESTS AND GROUSE MOORS.

By James G. Bertram.

Of the 19,777,490 acres of land and water which constitute the area of Scotland—and of which only 4,811,813 acres are arable—about 2,000,000 are denizened by the red deer and roe and some other wild animals. How much additional ground is occupied by grouse, which are found in every county of Scotland, we are unable to determine, but, in all likelihood, the area occupied by these and other wild birds, is not less than that given over to the stag and roebuck. Deer-stalking and grouse-shooting are *par excellence* the sports of Scotland, and annually attract to the 'land of the mountain and the flood' a large body of persons in search of recreation, and willing to pay for it at a rate that forbids all hope of profit. It has been calculated that every stag killed costs, on the average, 50 guineas, whilst the cost of grouse is reckoned at £1 per brace. It is not, we believe, possible to give absolutely reliable figures of the number of deer bred and fed in Scotland, or the actual number killed in each year, nor are official statistics published of the grouse harvest, or of the rental of the various shootings. According to a list given in an Appendix to the Report of the Commissioners who recently inquired into the condition of the crofters and cottars in the Highlands and Islands of Scotland, there are 110 deer forests in Scotland, occupying an area of 1,975,209 statute acres. Of these 36 are in the county of Inverness and 42 in Ross and Cromarty, the remaining 32 being situated in the counties of Aberdeen (6), Argyll (6), Banff (2), Caithness (1), Forfar (4), Perth (6), and Sutherland (4), besides 3 forests which are partially situated in two different counties. As will be seen from the following list, some of the Scottish deer forests are of great extent:—

Forest.	Proprietor.	County.	Acreage.
Mar,	Earl of Fife,	Aberdeen,	80,100
Blackmount,	Earl of Breadalbane,	Argyll,	70,330
Reay,	Duke of Sutherland,	Sutherland,	64,600
Glenstrathfarrar, etc.,	Lord Lovat,	Inverness,	51,290
Auchnashellach, etc.,	Lord Wimborne,	Ross and Cromarty,	49,580
Kinlochewe,	Sir Kenneth M'Kenzie,	Ross and Cromarty,	42,750
Amhuirmsnidh,	Sir E. H. Scott's Trustees,	Inverness,	40,100
Glenavon,	Duke of Richmond,	Banff,	37,150
Langwell,	Duke of Portland,	Caithness,	36,030
Ben Arim, etc.,	Duke of Sutherland,	Sutherland,	35,840
Athole,	Duke of Athole,	Perth,	35,540
Glencanisp,	Duke of Sutherland,	Sutherland,	34,490
Glenquoich,	E. Ellice's Trustees,	Inverness,	34,400
Ceanacroc,	J. M. Grant's Trustees,	Inverness,	32,760
Glenfeshie,	Sir Geo. M'P. Grant, and The Mackintosh,	Inverness,	31,830
Craskie, etc.,	The Chisholm,	Inverness and Ross,	30,810
Applecross,	Lord Middleton,	Ross and Cromarty,	30,420

In addition to this list there are 18 forests, each containing an area exceeding 20,000 but below 30,000 acres. The largest holder appears to be the Duke of Sutherland with 147,010 acres, in

addition to which the Duchess of Sutherland appears in the list as the owner of 34,730 acres in the conjoint counties of Ross and Cromarty. The Duke of Richmond's forests cover 59,750 acres of the county of Banff. Sir George M'Pherson Grant is proprietor of 61,090 acres in Inverness-shire. The united forests of Her Majesty the Queen extend over an area of 22,070 acres.

A considerable number of the Scottish deer forests are let on leases to tenants; and according to the assessments or rental, more than sixty are in the occupation of persons other than their owners, at rents which vary from £1000 to £4500 per annum. One gentleman is understood to pay over £8000 a year for the extensive range of ground of which he is the tenant. It is not possible to set down with accuracy the *actual* rents of the various forests, but from a list made up and published by Mr George Malcolm, factor of Invergarry, the following figures denote the actual or estimated annual payment made for some of the highest rented areas, including grazing and fishing:—Ballochbuie (Balmoral), £2393; Invercauld, £2000; Mar, £4000; Blackmount, £4500; Invermark, £2700; Ardverikie, £3000; Balmacaan, £3000; Ben Alder, £3000; Ceanacroc, £2470; Glenfeshie and Invereshie, £3800; Glenstrathfarrar, £5750; Glen Quaich, £3022; Kinloch and Beneveich, £2150; Athole, £3500; Auchnashellach, Coulin, etc., £2250; Applecross, £2200; Kinlochluichart, £3000; Letterewe and Fisherfield, £2370; and Strathconan, £2000. Estimating these sums of rent by the extent of acreage, it will be seen that the forest of Mar is valued at 1s. per acre; Blackmount at about 1s. 3d.; Glenstrathfarrar at a little over 2s.; Ceanacroc at nearly 1s. 6d.,—which shows an average of about 1s. 6d. At this rate the rental of the deer forests in Scotland would be a little over £148,000, for which nothing is obtained but the privilege of shooting so many deer. The following estimate has been made of the number of stags which it is calculated the forests in the counties named will yield:—

Aberdeen,	400	Forfar,	200
Argyll,	250	Inverness,	1500
Banff,	65	Perth,	300
Caithness,	100	Ross and Cromarty,	1300
Dumbarton,	12	Sutherland,	250

making, in all, 4377 stags, which, if estimated at the regulation price of fifty guineas, would mean a rental of very nearly £230,000 a year. But the price quoted includes various other items of expenditure than the rent, large sums being expended in wages and in the exercise of hospitality, so that, in all likelihood, a sum equal to the rent is spent every season by the tenant of a deer forest. Various reliable figures bearing on this point were stated during the inquiry into the condition of the crofters and cottars in the Highlands and Islands of Scotland. One gentleman who was examined mentioned that his expenditure in a period of eighteen years amounted to £105,000, or more than £5000 per annum. Sir John Ramsden had expended a total sum of £180,000. 'Mr Malcolm,' says the *Report*, p. 92, 'gives four instances which have come under his own observation, and which, we have reason to believe, occurred in his own parish, where the ordinary expenditure during a period ranging from three to seventeen years amounted in the aggregate to £121,209, and for the same periods there was a special expenditure of £65,876.' Large sums are constantly being expended in repairs and improvements, greatly to the benefit of the resident population; planting, building, and earthwork are always being executed; whilst there is a constant demand for ghillies and labourers, all of whom are drawn from the crofter class, who greatly prefer such employment. 'The number of persons permanently employed in connection with deer forests as compared with sheep farms is about the same, the persons employed all the year round being foresters in the one case and shepherds in the other; and in regard to temporary or occasional employment the advantage is in favour of deer forests' (*Report*, p. 85).

With reference to the contention that the ground occupied by deer would be more profitably devoted to the grazing of sheep, seeing that the weight of meat derived from venison only amounts to one-fifth of the mutton displaced, it has been argued that the whole matter resolves itself into one of rental, and that if the land brings 1s. 6d. per acre as a deer forest, no proprietor could be expected to accept only half of that amount for it as a sheep walk. This has been made a sentimental question, but as a matter of fact, it takes on an average five acres of land in the deer-forest regions of the Highlands to graze one sheep. The sheep fed in the four Highland counties during 1884 was as follows:

Argyll,	987,425	Ross and Cromarty,	309,888
Inverness,	709,471	Sutherland,	218,852

or a total number of 2,225,536. 'The loss to the community [from the non-feeding of more sheep] is not only insignificant, but almost inappreciable; while, owing to the large proportion

of wool from abroad, the additional supply of home-grown wool would be altogether unimportant if the area now occupied by deer were devoted to sheep' (*Report*, p. 87).

Grouse are most plentiful in the northern counties, and particularly in Perthshire, which is famed for the abundance and fine quality of its birds. We are unable to state the precise number of grouse moors in Scotland, as in some instances two or more are occupied by one tenant, whilst in some cases a large area may be divided into two or more shootings; but in all probability there are not less than 2400 shootings, in addition to the 110 deer forests. In the county of Perth there are at least 400 sporting estates, and the game-rental of that county exceeds to-day the sum of the whole game-rental of Scotland as it was assessed half a century since, about which period an extensive area of moorland could be had for about one-fifth of the money it costs to-day. The grouse harvest lasts from the 12th of August to the 10th of December inclusive, in the course of which time it has been estimated that during a plentiful season as many as from 800,000 to 900,000 single birds will be shot. That this estimate is not at all exaggerated, may be judged from some of the individual bags. In one year—the productive season of 1872—as many as 7000 brace were shot on the Moors of Delnadamph in Aberdeenshire. In Perthshire ten brace of grouse to each hundred acres may be calculated upon; on the Moor of Tulchan the kill in sixteen or seventeen days was 2000 birds. If each of the 2400 grouse moors of Scotland were to yield on an average only 200 brace of birds, the total number would, of course, be 480,000 brace, or 960,000 single grouse.

It is somewhat curious that, notwithstanding the prodigious annual slaughter of these birds, the number to be killed seems constantly to increase, till some kind of check takes place, such as the mysterious disease, which thins down the birds. The number of breeding birds required to provide such a supply of grouse as has been indicated, must of necessity be large, considering the constant mortality which is incident to the life of all wild animals. The breeding power of this bird of the heather is considerable. Each nest yields probably seven young ones, and as the parent grouse take great care of their young, most of the birds arrive at maturity. The exact number of moorfowl that a given expanse of heather will feed and breed is not well understood; some shootings are much more populous than others, the conditions of life being more favourable, food and shelter abundant, and enemies fewer. To all appearance the number of grouse which now reach the markets is very largely in excess of the quantity shot twenty-five years ago. During the first few days of every season the markets become glutted by the arrival of birds in tens of thousands, consigned to the big dealers of London, Liverpool, and Manchester, for immediate sale to the retail poulterers. Gentlemen who lease grouse moors have no alternative but to sell their birds, as they cannot possibly dispose of them in any other way. But no profit can be obtained by such sales. As already mentioned, it is calculated that each brace shot costs the lessee of a moor £1, but it is open to question if for all he sends to market he will receive more than 2s. each; whilst, in the case of a glut, half a crown a brace only has been returned for consignments of two or three hundred, the prices ranging from 6d. to 4s. each bird, according to quality and condition. The economy of a grouse moor is not so well understood as it ought to be; it should have been ascertained, long ere this, how many birds should be shot, and how many left, in order to keep up a proper breeding stock. A large number of parent birds is of course required to admit of the annual slaughter of 500,000 brace of grouse. The rents derived from grouse moors range from about 9d. to double that sum per acre, and the laird receives a rental for sheep fed as well—sheep and grouse being possible on the same stretches of heather, though deer and sheep cannot exist together.

A grouse when prepared for the spit will weigh 1 lb. on an average, so that the moors provide a considerable amount of food-stuff. Red deer or roe venison is not greatly appreciated for food, the best venison for the table being that derived from fallow or park-fed deer. In Scotland there fall to the guns of the deer stalkers in the course of the season, and from the slaughter of hinds which occurs later on, as many, perhaps, as 10,000 head of red deer and roebuck, weighing on the average 12 stone (14 lb. each) per carcase, thus yielding a food supply of 140,000 stone of venison, most of which is distributed among the servants of the forests, or in gifts to friends. It is thought that in all Scotland there are not, perhaps, more than from 50,000 to 60,000 head of deer of all kinds, which gives (at 50,000) some 40 to every thousand acres of forest. There are not more, as the ground occupied is in many places utterly barren, and scarcely able to provide herbage for a few mountain goats. If the persons who contend that men and sheep should take the place of the deer were to visit the vast solitudes of rock and moorland, they would at once see that human habitation is an impossibility. Large sums of money are annually expended in the Scottish Highlands by the lessees of deer forests and grouse moors, which, were it not for the sport these afford, would be spent in other countries.

XI. INDUSTRIES, SHIPPING, TRADE, AND COMMERCE.

By H. A. Webster, of the *Encyclopædia Britannica.*

INDUSTRY.

The linen manufacture is of great antiquity in Scotland, and by the close of the 16th century linen goods formed the principal article of export to foreign countries. But the flax continued to be spun upon the hand-wheel down to the last years of the 18th century, and in many districts well on into the present century. People now living are still using napery and sheeting every thread of which was spun by their grandmothers, or even their mothers, and their maidens, to whom the whirr of the wheel was as familiar as the sound of their own fireside gossip. In 1822 the quantity of linen stamped in Scotland was 36,268,530 yards, valued at £1,396,295. By 1837 the flax factories employed 15,462 hands, and by 1856, 31,722. In the latter year there were 168 factories, with 278,304 spindles and 4011 power-looms driven by 6346 horse-power, of which 5529 was steam. In 1878 (the latest year for which general statistics have been published by Her Majesty's inspectors) the number of factories was 155, with 265,263 spinning spindles, 18,495 doubling spindles, and 16,756 power-looms; and the number of hands employed was 9987 males and 27,489 females. Of the factories 67 were for spinning only (194,299 spinning spindles, 16,368 doubling spindles; 4568 male and 9758 female employées), 70 for weaving only (13,233 power-looms; 2726 male and 10,547 female employées), and 14 for both weaving and spinning (70,964 spinning spindles, 2127 doubling spindles, and 3523 power-looms; 2314 male and 7054 female employées). The district in which the flax manufacture is most extensively carried on is the east midland, including Forfar, Perth, Kinross, and Clackmannan. Dundee (*q.v.*) and Dunfermline are the great centres of the industry, the former for the coarser fabrics such as sailcloth (for the British Royal Navy and that of the United States), sacking, and sheeting; the latter for table linen, in the production of which it hardly has a rival in the world. Kirkcaldy, Arbroath, Forfar, Kirriemuir, Blairgowrie, Montrose, and Aberdeen are also largely engaged in different departments of this manufacture. Paisley is the great seat of the sewing thread manufacture. Hemp forms the material of a closely associated industry, to which, however, only three factories are devoted in the east midland district (3630 spinning spindles in 1878, 988 doubling spindles; 176 males and 289 female employées). 'There can be no question,' according to Mr Henderson's report in 1883, that 'the flax spinning trade has been harder hit by foreign competition than any other branch of our textile industries. The importations of flax yarns from the Continent, particularly from Belgium, have increased enormously of late years, and the market for flax goods is being constantly encroached upon by the manufacturers of jute and cotton. The rise of the jute industry has been remarkably rapid: this silky fibre of the *Corchorus*, scarcely known in the country about 1835, has since that year, and especially since 1860, gradually become in place of flax the great staple on which the prosperity of Dundee depends. The single factory of the Messrs Cox in Dundee turns out jute fabrics to the extent of nearly 16,000 miles per annum. Jute is also manufactured at Aberdeen. See Alexander J. Warden, *The Linen Trade, Ancient and Modern* (London, 1864).

In several towns where the linen was once of importance, such as Glasgow and Paisley, the cotton manufacture has taken its place. The first steam-engine for a cotton factory in Scotland was built in 1792. By 1837 the number of cotton mills in the country 'was 177, nearly all those of considerable size being situated in Glasgow or within a radius of 20 or 30 miles' from that city, where the raw material was mainly imported. In 1857 the cotton factories numbered 152, with 2,041,129 spindles and 21,624 power-looms, driven by 9971 horse-power (7641 steam), employing 7609 males and 27,089 females. The following are the figures for the cotton factories in 1878:—

	Factories.	Spinning Spindles.	Double Spindles.	Power-looms.	Males.	Females.	Total Employed.
Spinning only,	37	587,699	512,974	...	2,338	11,172	13,510
Weaving only,	30	...	...	13,649	961	6,942	7,903
Spinning and weaving,	14	373,560	13,620	8,616	1,103	7,021	8,124
Others,	8	...	...	...	82	156	238
Total,	89	961,259	526,594	22,265	4,484	25,291	29,775

Of the 37 spinning factories 32 were in the south-western district. Cotton spinning has considerably declined of late years, especially in Glasgow and its vicinity; but the weaving branch of the trade still retains a firm hold on the district. The industry as a whole is becoming in

Scotland more and more exclusively a woman's industry. In Glasgow, for instance, the number of men employed has diminished by one-half between 1871 and 1881.

The woollen manufacture is more generally distributed throughout the country than either the flax or the cotton manufactures. Thus in 1878 there were 2 wool spinning factories in the northern district, 3 in the north-western, 13 in the north-eastern, 26 in the east midland, 12 in the west midland, 7 in the south-western, 10 in the south-eastern, and 12 in the southern; and a somewhat less extensive distribution was reported in the case of the weaving factories. A process of centralisation has of course been going on in this as in other departments, and there are many towns and villages where the wool-spinner and fuller are forgotten craftsmen. Galashiels, Hawick, Selkirk, Dumfries, and Innerleithen are great seats of the woollen manufacture in the south of Scotland; Galashiels producing yarns, blankets, plaids, shawls, tartans, crumbcloths, and notably tweeds; Hawick, tweeds and hosiery; Innerleithen, blankets, tartans, etc. In the northern districts, Elgin is famous for its tweeds and plaids; Inverness has a similar industry, dating from 1798; and Aberdeen produces large quantities of tweeds, winceys, etc. There are large wool-spinning mills at Kinross and Alloa, the latter town having long had great reputation for its knitting worsteds. In 1878 the total number of woollen factories was 246, with 559,021 spinning spindles, 62,013 doubling spindles, and 6284 power-looms, employing 10,083 males and 12,584 females. Silk has never been very largely manufactured in Scotland. In 1856 there were 6 factories, with 30,244 spindles, and employing 837 persons (677 females); and in 1878 there were 5 factories, with 9790 spindles, and employing 617 persons (548 females). The chief seats are Glasgow and Paisley. Lace-making is represented only by a single factory, with 45 hands employed in 1878; while in England there were 282 factories, with upwards of 10,000 employed. Hosiery-weaving gave occupation to 646 males and 456 females. Carpet-making is carried on in Kilmarnock, Paisley, Glasgow, and Ayr; and Kilmarnock is the special seat of the Scottish 'braid bannet' and the night-cap. The floor-cloth and linoleum manufacture is most developed in Kirkcaldy, where it employs fully 1300 hands. India-rubber articles are produced in Edinburgh (where the North British Rubber Company was established in 1855, and the Scottish Vulcanite Company in 1861), and in Glasgow and Aberdeen.

Paper-making in Scotland dates from about 1695, but the oldest of the paper-mills still in operation is that of Valleyfield, Penicuik, originally erected in 1709 by Mr Anderson, printer to Queen Anne. The industry is represented in fifteen or sixteen separate counties, but on a large scale only in Midlothian (which may be considered the principal seat), Aberdeen, Lanark, Fife, Perth, Stirling, and Berwick. In 1881, 3363 males and 4612 females were engaged in the manufacture. In 1842 the number of paper-mills was 48; in 1860, 52; and in 1884, 65 (5 devoted to millboard), belonging to 57 firms and containing 96 machines. Paper was subjected to a duty as early as 1712; and this continued to be levied till 1861, when Mr Gladstone's Bill was carried by a majority of 15 in the House of Commons, and became law on June 15. The quantity of paper made in Scotland in 1842 was 17,065,666 lbs., and in 1860, 47,520,910; at present there is no means of forming a satisfactory estimate. At Glasgow, Leith, and Greenock the exported quantity was in 1882 valued at £119,452.

Paper-hangings began to be produced in Scotland only about the middle of the century, the development of the industry being largely due to Messrs Wylie & Lochhead, of Glasgow. It is still confined to that city, and there were only 131 persons who returned themselves as paper-stainers in 1881. A new departure in this method of decoration has been made by Mr Scott Morton, and is noticed in our article TYNECASTLE.

In the exploitation of her mineral wealth, Scotland has advanced with extraordinary rapidity within the present century. The output of coal, which was 7,448,000 tons from 368 collieries in 1854, was 20,515,134 tons from 470 collieries in 1882. The coal-miners numbered 32,971 in 1851, and 53,340 in 1881. Iron ores, mainly found in the district extending from North Ayrshire to Clackmannan and Fife, are the material of an extensive industry, which employed, in 1881, 10,473 miners and 38,309 manufacturing hands (the corresponding figures for 1851 being 7648 and 13,296). In 1800 the production of pig iron was only 8000 tons; between 1825 and 1845 it increased from 30,000 to 476,000 tons; and in 1882 it amounted to no less than 1,126,000 tons, in the production of which 2,552,245 tons of coal were used. The Carron Ironworks (*q.v.*), established in 1760, still remains one of the great seats of the manufacture, but have worthy rivals in Gartsherrie, Govan, Summerlee, Coltness, etc. In 1882 there were in Scotland 149 blast-furnaces in 23 works, 22 iron-mills and forges with 380 puddling-furnaces, and 74 rolling-mills. Steel was manufactured by the open-hearth method in 57 furnaces (Glasgow, Motherwell, Holytown, and Wishaw), and by Siemens's gas furnaces in Glasgow and Coatbridge.

Lead, and, to a small extent, silver, are obtained in Lanarkshire (4401 tons of dressed ore in 1882, valued at £41,134); alum-shale is worked in Stirlingshire, and zinc ore in Kirkcudbrightshire.

Since the establishment in 1850 of Mr Young's works at Bathgate for the distillation of

Boghead coal, the manufacture of mineral oils has become one of the leading industries of the country, and in 1881 gave employment to 1524 shale miners and a large body of workmen. Besides Bathgate, the principal seats are Addiewell, Broxburn, and recently Burntisland; the shale extending from Renfrew and Lanarkshire, through Midlothian and West-Lothian, to Fife. About £2,000,000 of capital is invested in the industry, and the works in operation can distil 4170 tons of shale per day. The total quantity of shale raised in 1882 was 994,487 tons, valued at £298,346.

The manufacture of explosives is of considerable extent, there being 3 factories in Argyll, 2 in Ayr, 2 in Midlothian, 1 in Linlithgow, 1 in Renfrew, and 2 in Stirling. Perhaps the best known is Nobel's works at Ardeer.

Working in gold, silver, and precious stones is largely carried on in Edinburgh and Glasgow; the former city, especially, being famous for its lapidaries. But though in the census of 1881 no fewer than 2552 are returned as watchmakers, hardly a single watch is really made in the country, which imports from England, Switzerland, and to a less extent from America. Clock-making, however, still exists to a limited extent.

A pottery was established at Glasgow in 1748, and that city is still the great seat of the manufacture in Scotland, though there are establishments of considerable importance also at Greenock, Sinclairtown (Kirkcaldy), Portobello, and Dunmore (near Stirling). The persons employed in 1871 were 2062; and in 1881, 3171. A cave at Wemyss on the coast of Fife still bears the name of 'the Glass Cave,' from the works erected there by George Hay, under a patent from James VI. The glass-making industry then introduced is now of great extent. Fine cut glass or 'crystal' is produced on a large scale and in the highest possible style by Mr Ford of Edinburgh. In 1871 there were 19 glass-works in Scotland, and in 1884 about 30, inclusive of bottle works. While in 1871, 759 persons were employed in the manufacture, the number in 1881 was 1665. The clay brought up from the coal mines in some places, as at Prestonpans, is used for making drains and water-pipes.

After the reduction of the duty, in 1823, from 6s. 2d. to 2s. 4¾d. per imperial gallon, the legal production of whisky, which had previously to compete with an enormous illicit competition (200 illicit stills known to exist in Glenlivet), made a very rapid advance; and in 1824, even the precincts of Glenlivet itself were invaded by George Smith, who defended his distillery against the hostility of the smugglers by 'two or three stout fellows armed with pistols.' The quantity charged duty for home consumption in Scotland was, in 1822, only 2,225,124 gallons, and in 1825 it was 5,981,549. The quantity produced in 1840 was 9,032,353 gallons; in 1850, 11,638,429; and in 1865, 13,445,752. By 1878 the amount was 17,670,460 gallons, and by 1884, 20,164,962. In this last year the number of distilleries at work was 122, only two more than the number in 1824, though between 1830 and 1840 there were upwards of 200. The places where the larger distilleries are situated are Edinburgh, Glasgow, Campbeltown, and Linlithgow. The quantity of spirits consumed as beverage in 1883 was 6,708,303 gallons, or at the rate of 1.753 gallons per head of the population.

The Scottish people, though generally considered drinkers of whisky rather than beer, were, in 1725, so incensed at the proposal to tax their malt, as to resort to very violent proceedings against the imposition. At Glasgow the riots were so serious that General Wade had to take possession of the city with a large force. In 1835 there were 640 persons licensed to brew beer in Scotland, in 1866 the number was 217 (98 wholesale brewers). This decrease is due to the gradual centralising of the industry in large establishments, the most important of which are situated in Edinburgh and Leith. On the abolition of the malt-tax a very large number of licences for domestic brewing were taken out, but they have since gradually decreased. In 1836 the Scottish brewers consumed 1,137,176 bushels of malt; in 1866, 2,499,019 bushels; and in 1880, the last year of the malt tax, 2,613,823. In 1882 the number of barrels of beer brewed was 1,088,000; in 1831, 1,122,360; and in 1884, 1,216,319. In 1883, 128,099 barrels were exported in drawback.

Sugar-refining, commenced at Greenock in 1765, has still its chief seat in that town, though it is also prosecuted to some extent in Leith, Glasgow, Dundee, etc. The manufacture of confectionery and fruit preserves is carried on in Edinburgh, Glasgow, Dundee (marmalade), and Forfar; and food preserving is an important industry in Aberdeen, Leith, and Edinburgh. The census of 1881 shows 1334 persons engaged in sugar-refining; but no distinction has been made between ordinary confectioners and pastrycooks, and those really worthy of the name of manufacturers.

Space forbids any attempt to give details in regard to the multitude of miscellaneous trades which exist in Scotland; some, like the leather and the soap manufacture of old standing and wide distribution, and others, like the making of velocipedes and sewing machines, of modern introduction and limited localisation. But we must not omit the great printing and publishing trade, which, with its headquarters in Edinburgh, has secondary centres in most of the prin-

cipal towns, such as Aberdeen, Paisley, and Perth. The Edinburgh printing establishments do a large amount of work for the London publishers. In map-making Edinburgh may claim to be the leading city in the United Kingdom. In 1885, 192 newspapers were published in the country. No recent history of Scottish manufactures can be referred to. Bremner's *Industries of Scotland* (1869) is an excellent compendium, but requires to be recast and brought down to date. Much interesting matter will be found in *Notices of some of the Principal Manufactures of the West of Scotland*, by Day, Mayer, Paton, and Ferguson (Glasgow, 1876).

SHIPPING AND TRADE.

Though as far back as 1249, a magnificent vessel (*Navis miranda*) was, according to Mathew Paris, specially built at Inverness for the Earl of St Pol and Blois to carry him, with Louis IX. of France, to the Holy Land, the number of ships in Scotland continued to be very inconsiderable till quite a recent period. In 1656 we had only 137 vessels, none of more than 300 tons burden, and making an aggregate of 5736 tons. By 1707 the number of vessels was still only 215, and the aggregate tonnage 14,485. But after the Union rapid advance was made. By 1800 the tonnage was 171,728 tons, and by 1840, 429,204 tons. Since the middle of the present century, when steam navigation (practically introduced in 1811 by Glasgow enterprise) had already become of great importance, the progress has been still more striking, as is shown by the following table of registered shipping:—

Year.	Sailing Vessels.		Steam Vessels.		Total Sailing and Steam Vessels.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1850	3432	491,395	169	30,827	3601	522,222
1860	3172	552,212	314	71,579	3486	623,791
1870	2715	727,942	582	209,142	3297	937,084
1880	2358	849,089	1095	598,951	3453	1,448,040
1881	2280	830,447	1153	662,833	3433	1,493,280
1882	2212	833,374	1211	741,572	3423	1,574,946
1883	2118	820,269	1317	824,988	3435	1,645,257
1884	2065	827,295	1403	866,780	3468	1,694,075

The following table exhibits the growth of the registered shipping at each of the leading ports between 1857 and 1884:—

	Sailing Vessels.				Steam Vessels.					
	Number.		Tonnage.		Number.		Tonnage.		Total Tonnage.	
	1857.	1883.	1857.	1883.	1857.	1883.	1857.	1883.	1857.	1883.
Glasgow,	458	607	162,355	411,413	153	772	56,591	568,251	218,946	979,864
Greenock,	386	323	83,304	153,575	30	93	5,739	61,172	89,043	214,747
Aberdeen,	252	116	65,814	67,308	15	90	4,347	40,820	70,161	108,128
Dundee,	269	123	50,477	64,790	9	69	1,852	43,740	52,329	108,530
Leith,	150	53	21,370	12,718	39	146	6,809	83,973	28,179	96,691

Turning from the shipping owned in Scotland to the extent of tonnage employed in Scottish trade, we find the expansion no less remarkable:—

Year.	Coasting Trade.		Colonial and Foreign.		Total.	
	Inwards.	Outwards.	Inwards.	Outwards.	Inwards.	Outwards.
1851	2,010,988	2,105,224	663,321	753,312	2,674,309	2,858,536
1856	2,049,390	2,056,090	793,193	965,447	2,842,583	3,021,537
1880	6,628,853	5,691,136	2,700,915	3,001,897	9,329,768	8,693,033
1882	6,918,655	5,832,271	2,968,299	3,490,742	9,886,954	9,323,013
1884	7,167,230	6,098,938	3,073,561	3,638,423	10,240,791	9,737,361

The enormous commerce which this represents has been nearly all developed since the Union, shortly after which attention began to be given to the trade with the American and the West Indian Colonies. In 1755 the exports amounted in value to £535,576, and the imports to £465,411. By 1801 the corresponding figures were £2,844,502 and £2,579,914; by 1851 they had increased to no less than £5,016,116 for exports, and £8,921,108 for imports. And if the increase in the first half of the century is great, much greater and more rapid has been the increase in more recent years. The following are the figures for the decade from 1874 to 1883:

Year.	Imports of Foreign and Colonial Merchandise.	Exports of the Produce of the United Kingdom.	Year.	Imports of Foreign and Colonial Merchandise.	Exports of the Produce of the United Kingdom.
1874	£31,012,750	£17,912,932	1879	£29,716,429	£15,167,154
1875	29,743,978	16,295,450	1880	34,997,652	18,243,078
1876	30,801,722	14,623,682	1881	34,116,826	18,896,878
1877	36,830,457	15,165,607	1882	34,308,613	20,878,705
1878	32,367,513	14,968,395	1883	37,854,613	20,952,830

As showing how these later totals are distributed among the different ports, the following tables are of interest:—

VALUE OF THE TOTAL EXPORTS OF THE PRODUCE OF THE UNITED KINGDOM AT EACH PORT.

	1878.	1879.	1880.	1881.	1882.	1883.
Aberdeen,	£94,321	£77,824	£113,088	£151,183	£140,732	£73,321
Alloa,	43,336	57,067	53,747	41,589	45,062	46,367
Arbroath,	4,214	1,934	3,706	257	4,309	4,310
Ardrossan,	49,439	95,543	137,890	70,006	92,884	125,963
Ayr,	3,796	3,406	5,403	6,330	14,979	13,381
Banff,	19,111	43,142	45,840	49,304	46,542	39,559
Borrowstounness,	94,535	96,689	105,912	93,060	175,085	197,384
Campbeltown,	305	647	754	...	...	...
Dundee,	881,406	916,442	839,084	956,308	873,863	769,185
Glasgow,	9,197,572	8,930,556	11,828,729	12,448,500	14,099,121	14,342,214
Grangemouth,	322,939	344,277	342,758	354,657	389,566	457,963
Granton,	138,462	122,788	130,908	166,328	177,957	123,352
Greenock,	349,731	422,835	423,092	386,973	462,796	421,222
Inverness,	1,252	14,786	15,318	18,824	14,983	6,298
Kirkcaldy,	159,149	200,693	191,379	247,706	253,588	303,754
Kirkwall,	9,882	9,772	14,594	10,857	19,809	47,930
Leith,	2,804,912	3,036,780	2,819,111	3,019,147	3,076,891	2,859,796
Lerwick,	40,405	38,066	85,653	97,974	173,099	328,263
Montrose,	10,621	24,838	29,739	44,390	42,280	20,087
Perth,	8	80	122	32	194	...
Peterhead,	481,375	386,391	642,593	489,917	513,674	419,303
Stornoway,	62,723	87,323	134,594	44,022	63,643	72,591
Troon,	65,386	87,603	128,846	59,231	79,740	67,023
Wick,	133,515	167,672	150,218	140,054	116,908	213,564

VALUE OF THE TOTAL IMPORTS OF FOREIGN AND COLONIAL MERCHANDISE.

	1878.	1879.	1880.	1881.	1882.	1883.
Aberdeen,	£902,908	£692,749	£780,865	£644,518	£583,259	£853,078
Alloa,	133,976	112,260	175,288	220,101	252,570	195,733
Arbroath,	356,222	194,793	325,999	296,664	348,036	180,324
Ardrossan,	52,512	53,671	53,087	86,364	103,675	79,775
Ayr,	66,311	36,835	57,709	99,891	59,707	88,131
Banff,	29,087	19,804	36,293	23,291	28,794	27,055
Borrowstounness,	147,687	126,334	226,572	164,314	264,473	300,811
Campbeltown,	74,699	78,200	65,609	92,888	65,620	113,863
Dumfries,	4,840	744	5,704	...	3,551	646
Dundee,	3,307,131	3,150,059	3,800,927	4,095,623	3,813,205	3,951,893
Glasgow,	11,365,604	11,205,017	12,564,978	11,669,546	11,418,172	13,972,464
Grangemouth,	874,888	818,232	1,255,943	1,087,308	1,334,266	2,120,482
Granton,	218,431	156,143	252,251	204,530	256,908	244,942
Greenock,	5,402,131	5,097,602	5,113,259	5,349,115	5,576,615	5,102,802
Inverness,	143,409	127,058	149,825	185,450	106,006	148,994
Kirkcaldy,	265,565	171,155	190,802	186,023	250,209	197,002
Kirkwall,	7,332	3,663	5,100	4,428	11,857	10,638
Leith,	8,514,889	7,351,548	9,475,030	9,245,109	9,355,056	9,854,263
Lerwick,	4,401	3,624	6,247	5,181	8,469	11,981
Montrose,	279,807	186,743	264,056	275,442	259,661	200,230
Perth,	19,014	17,962	27,978	16,819	17,204	...
Peterhead,	85,711	51,848	66,478	74,951	62,526	86,219
Stornoway,	7,116	2,318	3,886	3,229	9,214	4,330
Stranraer,	6,932	3,081	3,079	4,069	500	3,286
Troon,	35,878	21,479	73,064	50,872	81,027	46,199
Wick,	57,108	29,310	39,741	26,490	34,300	53,579
Wigtown,	3,923	4,197	4,882	4,880	3,733	5,903

SHIPBUILDING.

Shipbuilding has been for many years one of the most important departments of Scottish enterprise; the shipbuilders of Glasgow and the Clyde especially having taken a large share in the establishment of the great international steam-ship lines. Between 1818 and 1830 steam navigation perhaps owed more to David Napier of Glasgow than to any other man; and his successors have not been unworthy of him. Many of the most powerful vessels of the English navy are Clyde-built. The following figures show the number and tonnage of vessels built at different periods, exclusive of those built for foreigners :—

Year.	Sailing.		Steam.		Total.		Year.	Sailing.		Steam.		Total.	
	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.		Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.
1851	...	...	...	...	136	30,000	1882	79	73,422	192	165,899	271	239,321
1880	35	19,897	171	119,657	206	139,554	1883	105	75,190	271	198,370	376	273,560
1881	72	41,714	155	123,617	227	165,331	1884	90	72,954	190	97,781	280	170,735

Next to the Clyde ports (Glasgow, Port-Glasgow, Greenock), come Dundee, Leith, and Kirkcaldy. In 1884, 78 vessels (50,900 tons) were built for foreigners.

BANKS.

While in 1708 the development of the banking system was hampered in England by legislative enactment, in Scotland it was left to its natural course. The result is, that while in this country the 'Bank of Scotland,' so called, is the only bank constituted by Act of Parliament, there also exists a strong body of private banking establishments. These have shown as a whole remarkable stability, though the terrible failure of the City of Glasgow Bank in 1878 revealed unexpected elements of weakness. Previous to that disaster, the failure of the Western Bank (established 1832, with a capital of £1,500,000), and the supension of the City of Glasgow Bank in the crisis of 1857, had been the most alarming incidents. The following table exhibits various details regarding the several banks:—

Instituted.	Name.	Partners.		Branches.		Paid-Up Capital.	Price of £100 Stock or Share.	
		1864.	1884.	1864.	1884.	£	Dec. 1864. and	Dec. 1884.
1695	Bank of Scotland,	...	1723	60	110	1,250,000	£218	320
1727	Royal Bank,	...	1970	74	126	2,000,000	153¾	217
1746	British Linen Company,	798	1374	52	109	1,000,000	230½	308½
1810	Commercial Bank Limited,	805	1695	76	117	1,000,000	236	54
1825	National Bank of Scotland Limited,	1455	1828	72	95	1,000,000	220	308
1830	Union Bank of Scotland Limited,	1060	1520	103	126	1,000,000	186	20½
1825	Town and County Bank Limited,	529	1244	31	53	252,000	13½	17½
1836	North of Scotland Bank Limited,	1249	2648	34	64	400,000	8¼	10 7/10
1838	Clydesdale Bank Limited,	1302	1574	60	106	1,000,000	208	20½
1838	Caledonian Banking Company Limited,	725	980	16	23	150,000	5⅛	4½

The Perth Bank (circulation £45,515) was incorporated with the Union Bank in 1857, the Edinburgh and Glasgow Bank (circulation £137,104) with the Clydesdale in 1858, the Eastern Bank (circulation £37,440) with the Clydesdale in 1863, and the Dundee Bank (circulation £38,616) with the Royal in 1864.

The following table shows the position of the Savings' Banks under trustees in Scotland in 1864 and in 1883 :—

Year.	No. of Bks.	No. of Accounts.	Amount Owing to Depositors.	Invested with National Debt Commissioners.	Average Amt. of Receipts from Depositors.	Average Rate of Interest Paid to Depositors.	Total Cost of Management.	Officers' Salaries.
1864	54	159,319	£2,221,001	£2,819,201	£3 1 0	£2 19 1	£ 9,622	£ 7,680
1883	53	310,961	£7,359,586	£7,331,495	£3 4 6	£2 14 1	£22,726	£19,317

An act for allowing the deposit of small savings in such post-offices as might be authorised by the Postmaster-General was passed in 1861; and since then 7 private Savings' Banks in Scotland have closed and transferred their funds in whole or in part to Post-Office Savings' Banks.

XII. ROADS, CANALS, RAILWAYS, STEAMERS, TELEGRAPHS, Etc.

By Mr Thomas Croall, Scottish Correspondent of *Railway News*.

If the civilisation of a country were to be measured by the condition of its communications, Scotland would in her earlier history present a problem of a mixed kind. Of good roads, in the modern sense, she has become abundantly supplied within a century and a half, but previous to that time there were comparatively few 'made' roads, excepting those wonderful works of the Romans, whose remains still excite admiration. But it is urged by competent modern writers that Scotland stood higher four hundred years before the Union in all that indicates prosperity and order, and in particular as regards roads and bridges, than she did in the intervening period. The two great Roman roads entered Scotland near Carlisle and Jedburgh, the former advancing through Eskdale and crossing Birrenswark (where remains of a strong camp exist), thence northward, till it reached the western extremity of the northern wall; while the latter passed by the Eildon Hills, and thence to the shores of the Forth. Other roads of lesser importance were made, and north of the wall the road has been traced as far as the heart of Aberdeenshire. There are in Scotland several reputed Roman bridges, examples being at Inveresk in the east, and Innerkip in the west. The bridges spoken of in the post-Roman period are numerous, including bridges over the Forth at Stirling, the Tay at Perth, the Esks (North and South), the Spey, the Dee, etc. The selection of points for bridges was so happy, that succeeding ages have in most cases simply replaced or duplicated those structures, except where the advance of science has sought to bridge estuaries instead of rivers. Though roads were of necessity numerous, their quality was, as a rule, poor, more especially in upland districts and in the Highlands. The expression 'a made road' is so well understood in Scotland, that it is only the stranger who finds anything incongruous in the reference to Wade's military roads 'before they were made.' Most of the roads were mere footpaths, or were at best intended for riders or for use as drove roads. 'What vexed me most of all,' says Captain Burt in his *Letters*, 'they called it a road.' Yet fifty years before General Wade came to Scotland, a visitor had expressed his opinion that 'the highways in Scotland are tolerably good' (Kirke's *Modern Account of Scotland*). Their goodness must have been relative, for we find that about this period, when a coach was to be run between Edinburgh and Glasgow, the contractor only undertook to perform the journey there and back in six days, employing six horses, and the enterprise, though subsidised, proved unprofitable, and was given up. For interesting glimpses of the state of the roads of Scotland, reference may be made to various passages in Hill Burton's *History;* to Boswell's *Tour*, with Dr Carruthers' notes on this point; to Scott in *Guy Mannering* and other works; to MacCulloch's *British Empire*, etc. The Great North Road between Perth and Inverness, with its less important side roads, the Parliamentary roads and bridges, planned by Telford and carried out in the present century, and the enterprise of the various counties, or of individual proprietors (the Duke of Sutherland, for example), have covered Scotland with a network of good roads; while the necessities of the modern tourist traffic have caused many old roads to be improved, or new roads to be made. An example of the improvement of old roads is seen in the amended gradients of the road from Auchnasheen to Gairloch by Loch Maree; and a new road, entirely the growth of tourist traffic, was made in 1884 from the 'Clachan of Aberfoyle' to the Trossachs. The earliest Turnpike Act in Scotland dates from 1750, and under it and subsequent acts many highways and cross-roads were made. Tolls were always a grievance in Scotland as elsewhere, and although (except in the case of some riotous proceedings at Dunkeld Bridge) Scotland had no 'Rebecca's Daughters' to tear down the toll-bars, a vigorous agitation arose against them. In 1845, Mr Pagan of Cupar-Fife took up the subject in a pamphlet, and after much discussion a Royal Commission was appointed, which in 1859 recommended a plan for the total abolition of tolls. Several counties led the way by separate acts, and in 1883, under a general act passed in 1878, tolls ceased throughout Scotland, the roads being now maintained by a general assessment. The Commission reported that in 1859 there were 5768 miles of turnpike road in Scotland, with 1060 tolls upon them.

Canals were the second means of internal communication, and a considerable number of such waterways were constructed in Scotland, most of them being still in use. The canal from Aberdeen to Inverurie was partly utilised in the construction of the Great North of Scotland Railway, the Company having acquired its ownership; and the Glasgow and Paisley Canal has been converted into a railway. But the Caledonian and Crinan Canals, the Forth and Clyde Canal, the Union Canal, and the Monkland Canal are still used, and are described in detail in other parts of this work. Owing to the increased size of vessels, those canals, made for the

conveyance of sea-going vessels, have ceased to fulfil their functions, but are largely used for local purposes. Powers have been obtained to construct a ship canal between East and West Tarbert, on the Mull of Kintyre, to shorten the voyage to the Clyde, and save the dangers of rounding the Mull.

The formation of Scotland, and the singular character of so much of Argyll, Inverness, and Ross, made steam navigation of much benefit as a means of communication. The steamboat had its birth on the Clyde in Henry Bell's 'Comet,' and at this day the Clyde shows supremacy in the building of steamers, and great enterprise in the use of them. Some of the earliest sea-going steamers in Britain were those from Leith to London, Dundee, etc. Two lines of well-appointed steamers still run from Leith to London, and there are also vessels from Dundee and Aberdeen to London sailing regularly. From Glasgow there sail vessels to Canada and the United States, to the Mediterranean and India, and to Australia, South America, etc. Lines of steamers also sail regularly to Belfast, Dublin, Liverpool, Bristol, Southampton, Cork, etc.; and steamers to Ireland also sail from Ardrossan, Stranraer, etc. From Leith well-known lines of steamers sail to Aberdeen, Kirkwall, and Lerwick; to Antwerp, Rotterdam, Hamburg, the Baltic, Iceland, etc.; and of late years a line of steamers has been established between Leith and New York, with Dundee as a port of call. Grangemouth has also a large coal traffic by steamer to England and the Continent. The most extensive system of steamer communication is that from the Clyde to Campbeltown, Inveraray, Oban, Skye, and the Western Islands. This service was begun by Messrs Burns of the Cunard line, but it was not fully developed until taken over from that firm in 1851 by Mr David Hutcheson. The 'Royal Route' to Oban (so called because the Queen went by it on her west coast tour in 1847) was originally served by the first 'Iona,' a vessel since replaced by two of the same name, and now superseded by the magnificent 'Columba,' the largest, most completely equipped, and most popular pleasure steamer in the kingdom. While trading steamers of the line sail round the Mull of Kintyre, and maintain summer and winter a most valuable connection with the Inner and Outer Hebrides, the tourist service is conducted by the 'Columba' to Ardrishaig, thence by Crinan Canal, and by the 'Iona' to Oban. From that port vessels sail to Inverness by the Caledonian Canal, to Tobermory in Mull, to Staffa and Iona, to Stornoway, Lochmaddy, etc. A railway steamer connects Skye with Strome Ferry, the terminus of the Skye railway; and many steamers from Greenock, Helensburgh, Wemyss Bay, Fairlie, and Ardrossan maintain connection with Dunoon, Rothesay, Arran, and the many fine watering-places with which the shores of the Clyde and its numerous sea-lochs are studded. Steamers also sail on Loch Lomond, Loch Katrine, Loch Earn, Loch Tay, Loch Eck, and other waters in connection with the tourist routes by coach and rail.

Railways were first used in Scotland in connection with coal-mining, and from the character of the earliest lines they were rather tramways than railways. The line from Tranent Colliery to Cockenzie Harbour, the embankment of which served as a military point in the battle of Prestonpans in 1746, was really a tramway. The road still exists, but a side line from the North British Railway has taken its place so far as regards the conveyance of coal from the mine. The earliest railway constructed in Scotland under an act of parliament was the Kilmarnock and Troon, the act for which was passed in 1808, and which was completed in 1810. This line, which is now part of the Glasgow and South-Western Railway system, was primarily constructed for the conveyance of coal, but passenger omnibuses were run on it, and a 'trip on the tram-car from "Auld Killie" to Troon and back was in summer among the luxuries indulged in by "Kilmarnock Wabsters"' (M'Ilwraith's *Glasgow and South-Western Railway*). The railway system of Scotland has been fully described under the Caledonian, Glasgow and South-Western, Great North of Scotland, Highland, and North British Railways, the whole country being practically in the hands of those five companies. A few detached railways are separately noticed.

The construction of tramways in Scotland dates from 1871, when the first portion of the Edinburgh Tramway system was opened for traffic. As has been stated, the earlier railways were practically tramways in their method of construction. But the modern tramway, as a means of internal communication within towns, is of modern introduction. The system had its origin in America, and was first introduced into Britain, though in an incomplete form, by Mr G. F. Train, who formed the Birkenhead Tramway in 1862. The tramway system in Scotland embraces lines in Edinburgh, traversing the city, and connecting with Leith, Newhaven, and Portobello; in Glasgow (opened 1872), Aberdeen (1873), Dundee, and Vale of Clyde—the last named consisting (1.) of a tramway from Glasgow to Govan, and (2.) a tramway in Greenock, extending to Gourock. Animal power only has been used on those lines, except on the Govan section of the Vale of Clyde Tramway, and experimentally for a time between Edinburgh and Portobello. Powers were obtained in 1884 for the construction of the Edinburgh Northern Tramways, worked on the Hallidie cable system, by means of which cars are moved

on gradients where horses would not act, and where steam or other locomotives would have no grip of the rails. The cable system has been in use in San Francisco since 1873, with great success; also later in Chicago, and in Dunedin, New Zealand. The first cable tramway in Britain was opened at Highgate Hill, in London, in May 1884.

Previous to the purchase of the Telegraphs by Government in 1870, Scotland was almost wholly dependent on the railway lines for telegraph communication. The United Kingdom Company was originated to carry out the ideas of Mr Thomas Allan of Edinburgh in favour of a uniform charge, irrespective of distance. The railway lines being already monopolised by the existing companies, powers were obtained to construct telegraph lines on the turnpike roads, and by this means a few places were favoured with a telegraph connection apart from the railway. But in Scotland telegraphy was practically limited to the railway systems. An important exception to this was the enterprise of the Orkney and Shetland Telegraph Company, whose line, though of defective construction, did valuable service in connecting the islands telegraphically with the mainland; and the purchase of this system some time after the other telegraphs secured for the islands a share in the benefits of the post office uniform charge, without those questions of guarantee which in more recent years have so much impeded telegraph extension to the insular fishing stations in Scotland. The telegraph system of Scotland embraces full and direct connection with London at Edinburgh and Glasgow; direct London wires to Dundee, Aberdeen, Greenock, and Leith; wires from Edinburgh and Glasgow to Liverpool, Manchester, Leeds, and other important English towns; and a considerable network of local lines radiating from Edinburgh, Glasgow, Perth, Aberdeen, Inverness, and other centres to the smaller towns and remote districts. The terminal point northwards is Baltasound in Unst, and the wires are found at outlying places like Tongue in Sutherlandshire, the islands of Skye, Lewis, Harris, Mull, Islay, etc. In 1884, after many negotiations, the wire was extended to Castlebay in Barra, the extreme point of the 'Long Island,' where an important fishing industry languished for want of a telegraph connection. One of the most interesting telegraph lines in Scotland is that constructed by the post office as a 'private wire' from Fort William to the Scottish Meteorological Society's Observatory on the summit of Ben Nevis. A good road having been made to the top, the Observatory is now a favourite resort for tourists, and the opportunity of telegraphing home from 'the highest point in the British Islands' is much appreciated by visitors.

Internal communication by Telephone was partially begun in Scotland in 1879-80. Competing systems were established in Edinburgh and Glasgow, but in both those cities the business was finally merged in one 'Exchange,' that of the National Telephone Company. In 1884 the subscribers in those cities numbered over a thousand, two-thirds of the number being in Glasgow. Small 'exchanges' exist in Paisley and Greenock, the main purpose of which is to obtain the power of speaking through to Glasgow by 'trunk' wires, though also used to a small extent locally. A trunk wire between Edinburgh and Glasgow gives the subscribers to this wire communication to the various members of both local exchanges. In Dundee the Dundee and District Telephone Company established an exchange, which still exists, with about 300 members, while the National Telephone Company has also an exchange. The result of this rivalry is that telephone connection is cheaper in Dundee than in any other town, the annual charge being only £5 and £5, 10s. There is a 'trunk' connection between Dundee and Forfar, and the local exchange and wires extend to Broughty Ferry, Tayport, and Newport. Aberdeen has a telephone exchange, in the hands of the National Telephone Company, with about 300 subscribers. Owing to the heavy royalty claimed by the post office under the legal decision that a 'telephone' is a 'telegraph,' and the almost prohibitory conditions for trunk wires between towns, the progress of telephony has been much retarded throughout the kingdom; but in the end of 1884 certain concessions were offered by the post office, which rendered the extension of the system, and especially the growth of telephone connections between distant towns, much more easy.

XIII. POPULATION.

By H. A. Webster, of the *Encyclopædia Britannica.*

At the Union, in 1707, the population of Scotland probably did not exceed 1,050,000; and in 1755, from data furnished mainly by the clergy, it was estimated at 1,265,380. The first Government census was taken in 1801, and the ninth in 1881. The following table

shows, for each of the counties and for the whole kingdom, the returns of the whole series, with the increase or decrease per cent. during each ten years, decrease being indicated by the sign – :

Counties.	Persons.									Increase or Decrease per cent.							
	1801.	1811.	1821.	1831.	1841.	1851.	1861.	1871.	1881.	1801 to 1811.	1811 to 1821.	1821 to 1831.	1831 to 1841.	1841 to 1851.	1851 to 1861.	1861 to 1871.	1871 to 1881.
Aberdeen,	121,065	133,871	155,049	177,657	192,387	212,032	221,569	244,603	267,990	10	16	15	8	10	4.4	10.40	9.56
Argyll,	81,277	86,541	97,316	100,973	97,371	89,298	79,724	75,679	76,468	6	12	4	—4	—9	—12.0	—5.07	1.04
Ayr,	84,207	103,839	127,299	145,055	164,356	189,858	198,971	200,809	217,519	23	23	14	13	15	4.8	0.92	8.32
Banff,	37,216	38,433	43,663	48,337	49,679	54,171	59,215	62,023	62,736	3	14	11	3	9	9.3	4.74	1.15
Berwick,	30,206	30,893	33,385	34,048	34,438	36,297	36,613	36,486	35,392	2	8	2	1	5	0.8	—0.35	—3.00
Bute,	11,791	12,033	13,797	14,151	15,740	16,608	16,331	16,977	17,657	2	15	3	11	5	—1.6	3.96	4.00
Caithness,	22,609	23,419	29,181	34,529	36,343	38,709	41,111	39,992	38,865	4	25	18	5	6	6.2	—2.72	—2.82
Clackmannan,	10,858	12,010	13,263	14,729	19,155	22,951	21,450	23,747	25,680	10	10	11	30	20	—7.0	10.71	8.14
Dumbarton,	20,710	24,189	27,317	33,211	44,296	45,103	52,034	58,857	75,333	16	13	22	33	1	15.3	13.11	27.99
Dumfries,	54,597	62,960	70,878	73,770	72,830	78,123	75,878	74,808	76,140	15	13	4	—1	7	—2.9	—1.41	1.78
Edinburgh,	122,597	148,607	191,514	219,345	225,454	259,435	273,997	328,379	389,164	21	29	15	2	16	5.6	19.85	18.51
Elgin or Moray,	27,760	27,967	31,398	34,498	35,012	38,959	43,322	43,128	43,788	1	12	10	1	11	9.5	—0.45	1.53
Fife,	93,743	101,272	114,556	128,839	140,140	153,546	154,770	160,735	171,931	8	13	12	9	10	0.7	3.85	6.96
Forfar,	99,053	107,187	113,355	139,606	170,453	191,264	204,425	237,567	266,360	8	6	23	22	12	6.8	16.21	12.12
Haddington,	29,986	31,050	35,127	36,145	35,886	36,386	37,634	37,771	38,502	3	13	3	—1	1	3.4	0.36	1.94
Inverness,	72,672	77,671	89,961	94,797	97,799	96,500	88,261	88,015	90,454	7	16	5	3	—1	—8.5	—0.28	2.77
Kincardine,	26,349	27,439	29,118	31,431	33,075	34,598	34,466	34,630	34,464	4	6	8	5	5	—0.3	0.48	—0.48
Kinross,	6,725	7,245	7,762	9,072	8,763	8,924	7,977	7,198	6,697	8	7	17	—3	2	—11.8	—9.77	—6.96
Kirkcudbright,	29,211	33,684	38,903	40,590	41,119	43,121	42,495	41,859	42,127	15	15	4	1	5	—1.4	—1.50	0.64
Lanark,	147,692	191,291	244,387	316,819	426,972	530,169	631,566	765,339	904,412	29	28	30	34	24	19.1	21.18	18.17
Linlithgow,	17,844	19,451	22,685	23,291	26,872	30,135	38,645	40,965	43,510	9	17	3	15	12	28.2	6.00	6.21
Nairn,	8,322	8,496	9,268	9,354	9,217	9,956	10,065	10,225	10,455	2	9	1	—1	8	1.0	1.59	2.25
Orkney and Shetland,	46,824	46,153	53,124	58,239	61,065	62,533	64,065	62,882	61,749	—1	15	10	5	2	2.4	—1.83	1.78
Peebles,	8,735	9,935	10,046	10,578	10,499	10,738	11,408	12,330	13,822	13	1	5	—1	2	6.4	8.08	12.10
Perth,	125,583	134,390	138,247	142,166	137,457	138,660	133,500	127,768	129,007	7	3	3	—3	1	—3.8	—4.29	0.97
Renfrew,	78,501	93,172	112,175	133,443	155,072	161,091	177,561	216,947	263,374	18	20	19	16	3	10.2	22.18	21.40
Ross & Cromarty,	56,318	60,853	68,762	74,820	78,685	82,707	81,406	80,955	78,547	8	13	9	5	5	—1.5	—0.55	—2.97
Roxburgh,	33,721	37,230	40,892	43,663	46,025	51,642	54,119	47,407	53,442	10	10	7	5	12	4.7	—8.71	8.17
Selkirk,	5,388	5,889	6,637	6,833	7,990	9,809	10,449	18,572	25,564	9	13	3	17	23	6.5	77.74	37.65
Stirling,	50,825	58,174	65,376	72,621	82,057	86,237	91,926	98,218	112,443	14	12	11	13	5	6.5	6.84	14.48
Sutherland,	23,117	23,629	23,840	25,518	24,782	25,793	25,246	24,317	23,370	2	1	7	—3	4	—2.1	—3.68	—3.89
Wigtown,	22,918	26,891	33,240	36,258	39,195	43,389	42,095	38,830	38,611	17	24	6	8	11	—3.0	—7.76	—0.56
Totals,	1,608,420	1,805,864	2,091,521	2,364,386	2,620,184	2,888,742	3,062,294	3,360,018	3,735,573	12	16	13	11	10	6.0	9.72	11.18

While in 1871 a decrease of population was noted in fifteen of the counties, including both Orkney and Shetland, this was the case in eight only in 1881. Orkney, Inverness, Elgin, Perth, Argyll, Roxburgh, Dumfries, and Kirkcudbright, formerly decreasing, are now increasing.

According to the census returns, which allow the country 19,496,132 statute acres, the average density of population has been raised from 110.30 persons per square mile in 1871 to 125 persons in 1881; or, in other words, while in 1871 each person on the average had 5.80 acres, this space was in 1881 reduced to 5.1 acres. As the area of the country is now ascertained to be 19,777,490 acres, the density for 1871 should be 108.73, and for 1881, 120.88, and the person acreage 5.88 and 5.29. On the other hand, if, instead of the gross area, the land area only were taken without water or foreshore, the densities would be 112·8 and 125.41. Even then Scotland does not stand high in this respect. Scarcely a fourth of her area is capable of cultivation, and owing to special social causes her population is less evenly distributed than physical conditions permit. The following table shows the disparity of population to area in the individual counties :—

1871.		1881.
Sutherland, Inverness, Ross and Cromarty, Argyll, Peebles,	Counties with from 12 to 40 inhabitants per square mile,	Sutherland. Inverness. Argyll. Ross and Cromarty. Peebles.
Kirkcudbright, Nairn, Perth, Selkirk, Caithness,	Counties with from 40 to 60 inhabitants per square mile.	Kirkcudbright. Perth. Shetland. Caithness. Nairn.
Dumfries, Shetland and Orkney, Bute, Wigtown, Berwick,	Counties with from 60 to 80 inhabitants per square mile.	Dumfries. Berwick. Wigtown.

1871.		1881.
Elgin, Roxburgh, Kincardine, Banff, Kinross,	Counties with from 80 to 100 inhabitants per square mile.	Roxburgh. Bute. Orkney. Kincardine. Elgin. Kinross. Banff. Selkirk.
Aberdeen, Haddington, Ayr,	Counties with from 100 to 200 inhabitants per square mile.	Aberdeen. Haddington. Ayr.
Stirling, Dumbarton, Forfar,	Counties with from 200 to 300 inhabitants per square mile.	Stirling.
Fife, Linlithgow,	Counties with from 300 to 400 inhabitants per square mile.	Forfar. Dumbarton. Fife. Linlithgow.
Clackmannan,	Counties with from 400 to 500 inhabitants per square mile.	None.
None,	Counties with from 500 to 600 inhabitants per square mile.	Clackmannan.
Renfrew, Lanark, Edinburgh,	Counties with from 800 to 900 inhabitants per square mile.	None.
None,	Counties with above 1000 inhabitants per square mile.	Lanark. Renfrew. Edinburgh 1075.

Since about the middle of the present century the islands of Scotland have been steadily diminishing in relative population, the people being obliged, from causes which are at present the subject of bitter and intricate controversy, to emigrate in large numbers to the mainland or to the various British Colonies:

	Census 1851. Pop.	Percent. to Total Pop.	Census 1861. Pop.	Percent. to Total Pop.	Census 1871. Pop.	Percent. to Total Pop.	Census 1881. Pop.	Percent. to Total Pop.
Mainland,	2,721,384	94.21	2,897,300	94.61	3,198,109	95.18	3,573,081	95.65
Islands,	167,358	5.79	164,994	5.39	161,909	4.82	162,495	4.35

To some extent, of course, this movement is part of a general tendency of the people, in all countries of increasing industrial activity, to gather into the larger towns. How this is affecting Scotland is evident from the following figures:

	Census 1871.	Census 1881.	Births 1871-1880.	Deaths.	According to Census— Absolute.	According to Census— By excess of Births over Deaths.
Principal Towns, Pop. over 25,000, .	1,193,940	1,411,536	429,679	296,285	+217,596	+133,394
Large Towns, Pop. 10,000 to 25,000,	327,734	388,797	150,095	94,498	+ 61,063	+ 55,597
Small Towns, Pop. 2000 to 10,000, .	696,958	790,796	293,220	171,485	+ 93,838	+121,735
Mainland Rural, ...	1,009,382	1,014,056	327,663	182,134	+ 4,674	+145,529
Insular Rural, ...	132,004	130,388	33,694	21,066	− 1,616	+ 12,628
	3,360,018	3,735,573	1,234,351	765,468	375,555	468,883

If the proportion of the urban population had not altered during the decade, we should have had in our 'principal towns' only 1,327,388 inhabitants instead of 1,411,536, in our 'large towns' 364,365 instead of 388,797, and in our small towns 774,858 instead of 790,796. Thus the principal towns have been growing at the expense of the rural districts and the smaller towns. In various parts of Scotland, besides the deer-forest and sheep-pasture districts of the Highlands, the returning emigrant who visits the scenes of his childhood finds the little house which used to stand with its patch of garden at the corner of the croft reduced to a roofless ruin, or so completely swept away that he hesitates whether this be the spot after all. And perhaps the sole memento he can recover is a spray of honeysuckle or a sprig of rosemary still flourishing in the hedgerow or on the dyke side. But it is only in certain limited portions of the Highlands that the word depopulation can be applied. In Sutherland and Ross and

Cromarty nearly every parish (with some notable exceptions, such as Stornoway) shows a considerable diminution in the twenty years 1861-1881. Thus:

	1861.	1881.		1861.	1881.		1861.	1881.
Alness, . . .	1178	1033	Edderton, . .	836	789	Kilmuir Easter, .	1295	1146
Applecross, . .	2544	2239	Fearn, . . .	2083	2135	Kiltearn, . .	1634	1182
Avoch, . . .	1788	1691	Fodderty, . .	2247	2047	Kincardine, . .	1746	1472
Contin, . . .	1509	1422	Gairloch, . .	5449	4594	Kintail, . . .	890	688
Cromarty, . .	2300	2009	Glenshiel, . .	485	424	Knockbain, . .	2485	1866
Dingwall, . .	2412	2220	Killearnan, . .	1456	1059	Lochalsh, . .	2413	2050

The population is so sparse that in Contin, for example, each individual has 126 acres on the average, and in Glenshiel 135.

As regards the numerical representation of the sexes the most noteworthy fact is, that there is still an excess of females in the country at the rate of 107.6 to every 100 males, though (with one exception) every census since 1811 (when there were 118.5) has shown a progressive diminution. Linlithgow is the only county in which at three successive censuses the males have considerably preponderated. The counties in which female excess is greatest are Shetland (134.71), Forfarshire (121.80), Bute (117.99), and Kinross (115.20). This disparity appears only in the population overhead. On a division into age groups being made, it is found that from birth onward to 15 years the males greatly outnumber the females, that between 15 and 20 years the sexes are most nearly equal, and that the females begin to be in excess between 20 and 25 years of age. Of the males 66.281 per cent. are returned as single, 30.441 per cent. as married, and 3.278 per cent. as widowed; and the corresponding figures for the females are 62.854, 28.957, and 8.189 per cent. This shows a considerably greater proportion of unmarried persons in Scotland than in England. Even if we take the population above 15 years of age, 45.214 per cent. of the males and 43.033 of the females are in this category.

The following table gives details concerning the births, deaths, and marriages for the country at large:

Year.	Estimated Population.	Births.		Deaths.	Marriages.	Excess of Births over Deaths.
		Total.	Illegitimate.			
1855, . .	2,978,065	93,349	7,357	62,004	19,680	31,345
1856, . .	2,995,771	101,821	8,695	58,529	20,740	43,292
1857, . .	3,012,310	103,415	8,869	61,906	21,369	41,509
1858, . .	3,027,665	104,018	9,354	63,539	19,655	40,479
1859, . .	3,041,812	106,543	9,715	61,714	21,201	44,829
1860, . .	3,054,738	105,629	9,736	68,170	21,225	37,359
1861, . .	3,069,404	107,009	9,929	62,341	20,896	44,668
1862, . .	3,097,009	107,069	10,376	67,195	20,597	39,874
1863, . .	3,126,879	109,341	10,948	71,481	22,234	37,860
1864, . .	3,156,021	112,333	11,197	74,416	22,725	37,917
1865, . .	3,185,437	113,070	11,262	70,891	23,611	42,179
1866, . .	3,215,129	113,667	11,673	71,348	23,688	42,319
1867, . .	3,245,098	114,044	11,148	69,067	22,618	44,976
1868, . .	3,275,350	115,514	11,354	69,416	21,855	46,098
1869, . .	3,305,885	113,354	11,066	75,875	22,144	37,479
1870, . .	3,336,707	115,390	11,108	74,165	23,854	41,225
1871, . .	3,368,921	116,128	11,077	74,712	24,019	41,416
1872, . .	3,404,798	118,765	10,927	75,794	25,641	42,971
1873, . .	3,441,056	119,700	10,925	76,946	26,748	42,754
1874, . .	3,477,704	123,711	10,991	80,720	26,390	42,991
1875, . .	3,514,744	123,578	10,786	81,767	25,974	41,811
1876, . .	3,552,183	126,534	11,029	74,129	26,579	52,405
1877, . .	3,590,022	126,822	10,568	73,937	25,817	52,885
1878, . .	3,628,268	126,773	10,641	76,793	24,358	49,980
1879, . .	3,665,443	125,730	10,727	73,347	23,519	52,383
1880, . .	3,705,995	124,652	10,498	75,795	24,489	48,857
1881, . .	3,745,485	126,214	10,466	72,301	25,948	53,913
1882, . .	3,785,400	126,182	10,550	72,966	26,574	53,216
1883, . .	3,825,744	124,462	10,035	76,867	26,855	47,595

The marriage rate in the period 1855 to 1883 has only once (1873) reached the average marriage rate of Europe, 0.77 per cent., or 15.4 newly married persons to the 1000 of the population. The birth rate is also moderate. In the ten years 1873-1882 it had a mean of 3.464 per cent. of the population, the maximum being 3.57 per cent. in 1876, and the minimum

3·33 in 1882. In 1883 the rate was 3.25, and in 1884, 3.34. Throughout Europe the birth rate varies from 2.58 (France) to 4.38; Scotland thus belongs to the medium group. In the same ten years the death rate was 2.106 per cent., reaching a maximum of 2.33 in 1875, and sinking to 1.93 in 1881, and 1882. In 1883 it was 2.01, and in 1884, 1.94. The ratio and distribution of illegitimacy in Scotland will be found discussed by Mr George Seton in the *Proceedings of the Royal Society of Edinburgh*, No. 113, 1882-83.

If we turn from the country at large to the places where population is most densely massed, or in other words to the eight 'principal towns,' we find the growth in the present century often very striking:

Towns.	Population.								
	1801.	1811.	1821.	1831.	1841.	1851.	1861.	1871.	1881.
Edinburgh, Leith,	81,404	101,492	136,351	136,548 / 25,855	132,977 / 25,984	160,302 / 30,919	221,846 / 34,488	271,283 / 44,721	328,226 / 59,485
Glasgow,	77,058	103,224	140,432	193,030	261,004	329,097	436,432	566,577	674,095
Aberdeen,	26,992	34,640	43,821	56,681	63,288	71,973	73,905	88,189	105,189
Dundee,	27,396	31,058	32,126	48,026	64,629	78,931	90,568	109,141	140,239
Greenock,	17,190	18,750	21,719	27,082	36,169	36,689	42,673	57,821	66,704
Paisley,	25,058	29,461	38,102	46,222	48,263	47,952	47,427	48,257	55,638
Perth,	16,388	16,564	18,197	19,238	20,407	23,835	25,293	25,606	28,980

The average per cent. of births to the population of these eight principal towns was, between 1855 and 1864, 3.78; between 1865 and 1874, 3.85; and in the five years 1875 to 1879, 3.81. The subsequent years 1880-81-82-83 have not risen to the lowest of these averages. The average per cent. of deaths was 2.77 in 1855-1864, 2.81 in 1865-1874, and 2.59 in 1875-1879. The subsequent years have not risen to the lowest of these averages. The marriages in the same three periods showed percentages of 0.86, 0.92, and 0.88. The subsequent years have approached the first and last averages. As the death rate is an important indication of the comparative health of the different towns, it may be well to show its percentage to the urban population in more detail. The figures must not be taken as an absolute health-scale:

Towns.	Percentage of Deaths to the Population.												
	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	Mean of 10 Years.	1883.	1884.
Glasgow,	2.93	3.18	3.08	2.74	2.74	2.79	2.46	2.61	2.52	2.53	2.76	2.82	2.69
Edinburgh,	2.25	2.42	2.40	2.06	2.15	2.24	1.99	2.19	2.01	1.96	2.17	1.92	1.97
Dundee,	2.61	3.27	2.55	2.33	2.26	2.32	2.29	2.46	2.07	2.10	2.43	2.39	2.07
Aberdeen,	2.31	2.21	2.12	2.10	2.09	2.20	2.09	2.00	1.94	2.03	2.11	1.91	2.20
Greenock,	3.59	2.69	3.42	2.49	2.38	2.33	2.36	2.37	2.21	2.27	2.61	2.50	2.05
Leith,	3.19	2.75	2.66	2.47	2.51	2.97	2.75	2.59	2.28	2.57	2.67	2.03	1.88
Paisley,	2.19	2.47	2.03	2.19	2.12	2.14	1.98	2.30	2.08	1.86	2.14	2.42	2.59
Perth,	2.35	2.55	2.29	2.28	2.17	2.22	2.25	2.23	2.15	2.35	2.28	1.91	1.97

As 1,145,229 persons were added to the population of Scotland by excess of births between 1856 and 1881, the total population in 1881 ought to have been 4,141,000—2,978,065 being the figures assumed for 1855. But the census of 1881 returns only 3,735,573 persons, leaving 405,427 unaccounted for, who must consequently have removed from the country. Now, the actual number of persons of Scottish birth who are known to have left the United Kingdom for foreign parts during the period in question is 393,575, a strikingly near agreement, when it is considered that on the one hand a considerable proportion of emigrants return home; and on the other hand, that no record is kept of those who remove to England or Ireland. The following are the actual returns of emigration since 1856:

Year.	Persons of Scottish Birth.	Percent. of Total Emigration.	Percent. of Total Population.	Year.	Persons of Scottish Birth.	Percent. of Total Emigration.	Percent. of Total Population.
1856-60, average,	11,803	10	0.389	1878, average,	11,087	10	0.305
1861-65, ,,	12,492	9	0.399	1879, ,,	18,703	11	0.510
1866-70, ,,	17,124	10	0.523	1880, ,,	22,056	10	0.595
1871-75, ,,	19,011	10	0.552	1881, ,,	26,826	11	0.716
1876, ,,	10,097	9	0.284	1882, ,,	32,242	12	0.851
1877, ,,	8,653	9	0.241	1883, ,,	31,139	10	0.814

While the numbers thus show a great increase in recent years, the proportion to the total of British emigrants remains almost unchanged. In the same period English-born have increased so as to form 57 instead of 30 per cent. of the whole, and Irish-born decreased from 61 per cent. to 33 per cent.

	1871.		1881.	
	No.	Percentage.	No.	Percentage.
Professional Class, . . .	72,911	2·17	96,103	2·57
Domestic Class, ...	159,403	4·74	176,565	4·73
Commercial Class, . . .	114,694	3·41	132,126	3·54
Agricultural Class, ...	270,008	8·04	269,537	7·21
Industrial Class, ...	751,281	22·36	932,653	24·97
Unoccupied Class, . . .	1,991,721	59·28	2,128,589	56·98

The above table shows there has been an increase in the professional, the commercial, the industrial, and especially the domestic class at the expense of the agricultural; but it must be particularly noted that the lower percentage shown by the Unoccupied Class is partly due to the fact that paupers, who in 1871 were rightly included in this category, were in 1881 returned under the occupation at which they used to work.

According to the census returns of 1811 and 1841 the ratios of the agricultural, commercial, and miscellaneous classes of the community were as follows: 35, 44, and 21 per cent. at the former date, and 22, 46, and 32 at the latter.

XIV. EDUCATION.

By W. Scott Dalgleish, M.A., F.E.I.S., author of *Memorials of the High School of Edinburgh*, etc., etc.

Scotland has long enjoyed the reputation of being one of the best educated nations in Europe. The claim to that character is certainly warrantable, even if it has regard to nothing more than to the systematic provision of educational institutions of all grades—primary, secondary, and university or higher. No other country in Europe possessed at so early a time so complete an equipment of educational machinery.

If we view the development of education in Scotland historically, we must give the first place to the universities, the second place to secondary schools, and the third place to the elementary school system. This is due to the fact that education was in the first instance the creation of the Church. Its primary object was the professional equipment of the priesthood. By and by the training of the sons of the barons, who formed the ruling class, was conjoined with that of the churchmen. The education of the people was a much later idea, which, in point of fact, did not come into force until after the Reformation, in the beginning of the seventeenth century.

University Education.—There are four universities in Scotland—those of St Andrews, Glasgow, Aberdeen, and Edinburgh. The first three were pre-Reformation universities, and were founded by Papal bull on the model of the schools of Italy. The University of Edinburgh, and one of the colleges in Aberdeen, were founded after the Reformation by Royal Charter. (See separate Articles on the University towns.)

The University of St Andrews was founded in 1411 by the bishop of the diocese, who, with the help of King James I., obtained, two years later, a bull from Benedict XIII. In the sixteenth century it comprised three distinct corporations—St Salvator's College, St Leonard's College, and the College of St Mary. Its constitution has undergone various changes, but it now forms a single corporate body, including two colleges—the College of St Salvator and St Leonard, united in 1747, and devoted to Arts and Medicine; and the College of St Mary, devoted to Divinity.

The University of Glasgow was founded in 1450 by bull of Pope Nicholas V. It now includes four faculties—Arts, Divinity, Law, and Medicine. New buildings, begun in 1868, will cost, when completed, £470,000, of which £165,000 has been contributed in Glasgow and its neighbourhood.

The University and King's College of Aberdeen was founded in 1494, and sanctioned by Papal bull. The Marischal College and University of Aberdeen was founded in 1593 under a charter ratified by Parliament. The two colleges and universities were united in 1860.

The University of Edinburgh was founded in 1582 by James VI. It was put on an equality with the other universities of Scotland by an Act of the Scottish Parliament in 1621. Extensive additional buildings have lately been erected for the accommodation of the Medical Faculty. The Tercentenary Festival of the university was celebrated with great rejoicings in April 1884.

University College, Dundee, was founded and endowed by Miss Baxter of Ellangowan and Dr John Boyd Baxter of Craigton, Dundee, in 1881. There are six Professors, one of whom is Principal. The college opened in 1883 with 300 students.

The strength of the teaching staff and the number of students and of graduates in the universities of Scotland in 1883-84 are shown in the following table:

	Principal and Professors.	Lecturers and Assistants.	Total Teaching Staff.	Students.	Graduates.					Total Graduates.	Members of General Council.
					In Arts.	In Medicine.	In Law.	In Science.	In Divinity.		
St Andrews, .	15	...	15	195	19	10	...	1	...	30	1547
Glasgow, . .	28	23	51	2212	105	190	17	7	19	338	3860
Aberdeen, . .	23	13	36	859	76	73	...	...	2	151	2807
Edinburgh, .	39	53	92	3371	120	400	6	10	18	554	5200
Dundee, . . .	6	1	7	330	...	...	...	...	...	...	...
Total, . .	111	90	201	6967	320	673	23	28	39	1073	13,414

The constitution of the Scottish Universities was remodelled by Act of Parliament in 1858, which appointed an Executive Commission to carry out its enactments in detail. It created in each university two bodies, in addition to the Senatus Academicus, to regulate its affairs—the University Court, a body of from six to eight members, which is the highest authority in the university organisation; and the General Council, which consists of the registered graduates in all faculties. The official head of each university is the Chancellor, who is elected for life by the General Council. The chairman of the University Court is the Rector, who is elected for a term of three years by the matriculated students. The administrative body is the Senatus Academicus. In the University of Edinburgh there is also a Court of Curators, which dispenses the patronage formerly exercised by the Town Council of the city.

The Parliamentary Reform Act of 1867 gave two Members to the Scottish Universities—the one to Edinburgh and St Andrews, the other to Glasgow and Aberdeen. The electors are the members of the General Councils.

Degrees.—The degrees conferred by the Scottish Universities are those of Master of Arts (M.A.), Bachelor of Law (B.L.), Bachelor of Laws (LL.B.), Doctor of Laws (LL.D., honorary), Bachelor of Medicine (M.B.), Master of Surgery (M.C.), Doctor of Medicine (M.D.), Bachelor of Science (B.Sc.), Doctor of Science (D.Sc.), Bachelor of Divinity (B.D.), Doctor of Divinity (D.D., honorary).

Theological Education.—Theological education is overtaken to a large extent in denominational colleges. The Chairs of Divinity in the universities are filled only by clergymen of the Established Church. The Free Church has three colleges—in Edinburgh, in Glasgow, and in Aberdeen. The United Presbyterian Church has a college in Edinburgh. The Congregational Church also has a divinity hall. The Baptists have a theological institution in Edinburgh. The Scottish Episcopal Church has a college in Edinburgh, established in 1877. Trinity College, Glenalmond, in connection with the same body, was founded in 1841. The Roman Catholic Church has a college at Blairs, Aberdeen, established in 1829.

Professional Licences.—Besides the university degrees in medicine, professional licences are granted by the Royal College of Physicians and the Royal College of Surgeons of Edinburgh, and by the Faculty of Physicians and Surgeons of Glasgow. Schoolmasters are not required by law to possess any academic degree or professional licence, but they derive certain advantages from possessing the university degree of M.A. The Educational Institute of Scotland, a chartered body, has the right to confer the title of Fellow (F.E.I.S.). Elementary schoolmasters must hold certificates from the Education Department in order to earn grants for their schools. The Training Colleges for teachers (male and female) in Edinburgh, Glasgow, and Aberdeen are managed by the churches, and are largely subsidised by the State (see page 99).

The Anderson's University in Glasgow embraces a medical school, mechanics classes, and classes for general literature. The Watt Institution and School of Arts in Edinburgh is a technical college for science, applied science, literature, and languages. Schools of science and art in connection with the South Kensington Science and Art Department have been established in Edinburgh, Glasgow, and all the leading towns of Scotland.

Local examinations, similar to those of Oxford and Cambridge, have been instituted by all the four Scottish universities. University Certificates in Arts for women are granted, after examination, by all the four universities. St Andrews also confers on women the title of Literate in Arts (L.A.).

Secondary Education.—After the universities, secondary education comes next in point of time. There can be no doubt, indeed, that there were secondary schools in Scotland before there were universities. A school in connection with the church of St Andrews is referred to in ecclesiastical statutes of the year 1120. After that date there are frequent references to schools in connection with abbeys and cathedrals. But the earliest legislative enactment on the subject was the statute of 1496 (James IV.), requiring all 'barons and freeholders of substance' to send their eldest sons to school; and to keep them at school until they were 'completely founded,' and had 'perfect Latin,' as well as a knowledge of art and 'jure,' or law. If there had not been schools in existence giving the education specified, the statute would not have been passed. That the schools were secondary schools is implied, both in the subjects prescribed, and in the social class on which the obligation was laid. It was no doubt the primary aim of these schools to train juvenile ecclesiastics; but it was natural that the sons of barons and freeholders who wished to learn should be received along with these. It was the object of the statute of 1496 to enjoin this attendance on the part of secular students destined for the public service; but it is not known how far the injunction was observed.

At the beginning of the sixteenth century there existed grammar schools, or Latin schools, of some repute, in many of the burghs of Scotland. After the Reformation these schools passed into the hands of the Town Councils, and were in some cases helped with an annual grant from the 'common good' of the burgh. The establishment of a 'Latin school' beside every several kirk 'in towns of any reputation,' and of a 'college for logic, rhetoric, and the tongues' in every 'notable town,' was part of the comprehensive scheme propounded in the First Book of Discipline (1560). If the scheme had been carried out, Scotland would have had a system of secondary schools as complete as her parochial school system. But it was not carried out, being only a recommendation of the Church, and not an Act of Parliament. The cupidity of the nobles deprived education of much of the forfeited revenues which the reformers had destined for its support. The point in which failure was most conspicuous was the establishment of colleges or high schools in 'notable' towns. That is the particular in which Scottish education has always been most defective. Nevertheless, Town Councils were usually zealous in supporting the burgh schools. They frequently guarded them by a system of 'protection' which prohibited adventure schools, or which forbade the burghers to send their children to any but the authorised school of the burgh. In 1867, the number of schools returned as 'burgh schools' to the Education Commissioners of that year was 26. When the Act of 1872 passed, only 11 schools were scheduled in it as 'higher class public schools.' The number has now been increased to 17.

The Education Act of 1872 included burgh as well as parochial schools. That is one of the features of the Act that distinguish it most clearly from the English Act of 1870, which related only to primary schools. But the Act of 1872 embraced burgh schools only formally and in a left-handed way. It transferred the management of the schools, including the appointment of teachers, to the School Boards; but it expressly forbade the participation of these schools in the school fund, excepting for the maintenance of buildings, and for the expenses of examinations. These provisions of the Act of 1872 were enlarged by the Act of 1878, which authorised School Boards to pay from the school fund, with the consent of the Education Department, such expenses for the promotion of efficient education as were not provided for in the principal Act. The amending Act also empowered School Boards to pay for new school buildings, and authorised the Department to make provision for the examination of higher class public schools and of secondary schools under private authorities. These enactments, however, have not yet been taken advantage of by the school boards of Scotland, except as regards buildings. The burgh and grammar schools under the management of school boards provide a very small part of the secondary education of the country. In all the larger towns there are adventure schools, generally well conducted; and in some there are proprietary schools and endowed schools, which provide efficiently for the higher education.

Endowed Schools.—The educational endowments of Scotland were found by the Royal Commissioners of 1872-75 to yield an annual income of £175,000. This sum included £79,000 for hospitals which are mainly secondary foundations, and £16,000 for schools

which are purely secondary. The rest was for mixed endowments. In 1882 an Act was passed to reorganise the educational endowments of Scotland by means of an executive commission. The commissioners were empowered to prepare schemes remodelling governing bodies, and rearranging the administration of revenues with the view of making the funds available, after fairly satisfying the primary objects of the donors, for the promotion of the higher education of boys and girls. The commission is still (1884) in the midst of its important labours, and it is impossible yet to speak with certainty of their results, especially as a large part of the time of the commission has necessarily been occupied with preliminary inquiries. At December 31, 1883, nineteen schemes had been published, including forty-two separate endowments, with a gross annual revenue of £17,597. The most important of these were Hutcheson's Hospital, Glasgow; two other schemes, embracing nearly all the other Glasgow endowments; and Steel's Hospital. Since December 31, 1883, seventy-five schemes have been published, the most important of which are the Edinburgh schemes, including those for George Heriot's (£25,000 a-year), Donaldson's, John Watson's, the Orphan, and the Trades Maiden Hospitals. The Heriot scheme includes a proposal to assign £4000 a-year for the maintenance of the Heriot-Watt College, for the promotion of technical education—a department for which very inadequate provision is made in Scotland. Twenty schemes have already been approved by the Queen in Council, but these do not include any of first-rate magnitude or importance. The schools under the management of the Merchant Company of Edinburgh were remodelled in 1870, under the Endowed Institutions Act of 1869. They include four secondary schools (two for boys and two for girls), and an elementary school for boys and girls. The scholars (partly foundationers, and partly non-foundationers who pay moderate fees) number 5000.

Elementary Education.—The first great impetus given to popular education in Scotland came from the Reformers, who saw that the strength of their movement lay in the enlightenment of the mass of the people. Hence, the scheme of the First Book of Discipline already referred to. One of its chief features was the recommendation to plant a school for 'the first rudiments' of learning in every rural parish. Probably that part of the scheme would have borne as little fruit as that relating to secondary schools, but for an Act of the Privy Council in 1616, ordaining the establishment of a grammar school in every parish, and requiring the heritors to support it. This Act was ratified by the Parliament of 1633—the year in which Charles I. visited Scotland and established Episcopacy—which empowered the bishops, with consent of the heritors, to exact a tax for the support of education. The ecclesiastical and political troubles of the next half century hindered the operation of this enactment. The Revolution settlement of 1689 brought a measure of peace. Its effect was seen in the statute of 1693, which restored the authority of the Presbyterian Church in matters educational.

Then came the famous Act of 1696, which has been justly described as 'the Charter of Scottish education.' That Act recast the system of popular education. It required the heritors in every parish in the land to provide a suitable schoolhouse, and a salary for the teacher of at least 200 merks, or about £11 a year; but it retained the authority of the Church by authorising the presbytery of the bounds, in case of default, to provide the schoolhouse and the schoolmaster's salary at the cost of the heritors. It was to this Act that Scotland owed the system of parish schools, spread over the length and breadth of the land, which made the Scottish peasantry famous for intelligence and enterprise, and which raised Scotland to the front rank of educated nations. It was, of course, chiefly in the Lowlands and in the centres of industry that its beneficial effects were felt; but even in the Highlands, in spite of the disturbance caused by successive Jacobite rebellions, it exercised a humanising influence, and bore a fair measure of good fruit.

No further attempt to improve Scottish education was made till 1803, when an amending Act was passed by the Imperial Parliament, increasing the salaries of the schoolmasters, and assigning to them dwelling-houses and gardens. But the School was still regarded as an adjunct to the Church, and the schoolmaster continued to be the vassal of the parish minister and the Presbytery, and was required to sign the Confession of Faith.

The Commission of 1818 revealed a lamentable state of educational destitution, especially in the Highlands, although the Society for Propagating Christian Knowledge had been doing good work since its institution in 1704. The Church made strenuous efforts to remove the reproach that lay on the country. The General Assembly's Committee on Education was appointed in 1824, and established schools in many destitute districts. These efforts, however, were quite inadequate to meet the needs of the country; and the Church gladly availed itself of the system of Grants in Aid established in 1839, which proved to be the point of the wedge of State education in Scotland as well as in England.

The Disruption of 1843 in the Church of Scotland greatly increased the number of schools in the country. The Free Church resolved to provide schools of its own, partly to give employment to the extruded schoolmasters, partly that its people might not require to send their

children to the parochial schools, which were attached to the Established Church. The movement had its origin in ecclesiastical rivalry, rather than in a desire to supply educational deficiencies. It resulted, therefore, in producing educational redundancy, as well as in increasing sectarian bitterness. The first loosening of the tie between the parochial schools and the Church took place in 1861, when an Act was passed transferring to the Scottish Universities the examination of parochial teachers, previously entrusted to Presbyteries. The Act also modified the ecclesiastical test, and thereby opened the office of parochial schoolmaster to members of all the Presbyterian Churches. At the same time it raised the minimum salaries of teachers to £35 a year, and the maximum to £70.

The report of the Commission of Inquiry, published in 1867, emphasised the deficiencies which had been previously discovered or suspected, and revealed others. One-fifth of the children of school age were at no school, and only one-half of those at school were at inspected schools. In most cases the attendance was very irregular. The country was evidently ripe for a complete system of national education. Abortive attempts to deal with the question were made in 1852, 1869, and 1871. At last the great measure of 1872, with which the name of Lord Young is honourably associated, was passed, and a new era opened in the Educational History of Scotland.

The distinguishing feature of the Education Act of 1872 was its thoroughness. It did not seek merely to amend, or to supplement, the system previously in existence. With some minor exceptions to be noted presently, it either absorbed or swept away the existing machinery, and established a new and complete system in its place. The exceptions referred to did not interfere with the essential characteristics of the new organisation, which were, universal School Boards, a universal school rate, and universal compulsory attendance. Under the Act, a School Board, elected every three years by the ratepayers, female as well as male, is established in every parish and burgh in the country. Each Board is the responsible educational authority in its own district. It is the primary duty of the Board to provide an adequate supply of school accommodation. The Board manages the schools, appoints the teachers, who hold office at its pleasure, and regulates the course of instruction; and it is answerable to its constituents, the ratepayers, alone for the manner in which it discharges these duties. The School Board is thus a popular and representative institution, and is a notable instance of local self-government. The Board is empowered to levy an assessment on the rental of the parish or burgh, called the school rate. The primary sources of school revenue are the fees and the Government grant, which is distributed on the conditions of the code of the Scottish Education Department. Whatever deficiency is found to exist in the expenditure when these two sources of revenue are exhausted, must be made up from the school rate. The rate is therefore a variable quantity. It varies from 3d. and 4d. in the £ in populous and favoured burghs, to 4s. and 5s. in remote parishes in the Highlands and Islands.

Compulsory attendance is universal in Scotland. The corner-stone of the Act of 1872 is the requirement that 'It shall be the duty of every parent to provide elementary education in reading, writing, and arithmetic for his children, between five and thirteen [altered by a subsequent Act to *fourteen*] years of age.' The rule, however, admits of exceptions in the case of children over ten years of age who hold an Inspector's certificate of proficiency, and of half-timers under the Factory and Workshops Acts and the Mines Regulations Act. The School Board ascertains, through its 'compulsory officer,' what children of school age are not at school, and prosecutes the parents, who may be punished by fine or by imprisonment. But if a parent is unable to pay the school fees of his children, he may apply to the parochial board, and have them paid in whole or in part out of the poor fund.

Religious instruction is given under the check of a conscience clause, which requires that instruction to be given at specified times, and which allows a parent to withdraw his children from school during these hours. In this connection, notice may be taken of the exceptions to the thoroughly national character of the system, already referred to. The Act allowed denominational schools to be continued, and to receive the Government grant, if the Education Department was satisfied that the character of the population in any district rendered this necessary.

The Scotch code regulates the distribution of the annual parliamentary grant, which amounts, for Scotland, to £475,000 a year. Payments are made (1.) on attendance; (2.) on individual examination in reading (which includes grammar), writing (which includes spelling and composition), and arithmetic; (3.) on class examination in history and geography; (4.) on individual examination in specific or higher subjects — mathematics, English, Latin, Greek, French, German, mechanics, chemistry, animal physiology, light and heat, magnetism and electricity, physical geography, botany, and domestic economy. Special grants are also made for evening schools, for small schools in thinly peopled districts, and for pupil-teachers.

The effects of the Education Act of 1872 cannot be adequately estimated by statistics. It

has certainly given a great impetus to education all over the country, the most satisfactory outward sign of which is seen in the substantial and handsome new school-houses which adorn every burgh and every parish even in remote districts. Since 1872, 970 new school-houses have been erected, 369 old school-houses have been enlarged or improved, and 755 teachers' residences have been built, at a cost of £2,661,740, the whole of which has been borne by the rates, excepting £570,302 which came from Government grants. There are 982 school boards in Scotland—923 in parishes, and 59 in burghs. The following table shows in a succinct form the progress made in school supply, in school attendance, and in other particulars during the years from 1874 to 1884:—

	1874.	1884.
Schools inspected,	2,366	3,131
Scholars provided for,	372,090	655,672
Scholars on registers,	344,628	587,945
Scholars in average attendance,	263,748	448,242
Scholars examined in higher subjects,	4,407	61,429
Certificated teachers,	3,165	6,220
Assistant teachers,	66	1,012
Pupil teachers,	3,833	3,629

Inspection.—There are in Scotland twenty-six Inspectors of Schools, of whom three are senior inspectors. There are two sub-inspectors, and twenty inspectors' assistants. The General reports of four or five inspectors are published in each year's Blue Book.

Training of Teachers.—There are seven Training Colleges for teachers in Scotland, all connected with ecclesiastical denominations—three in connection with the Established Church, three with the Free Church, and one with the Scottish Episcopal Church. The number of students in training at these colleges in 1883-84 was 851—302 male and 549 female; and the amount of expenditure was £37,492, of which £26,635 came from Government grants, and £10,838 from other sources.

In 1876, Chairs of the Theory, Practice, and History of Education were founded in the Universities of Edinburgh and St Andrews by the trustees of Dr Andrew Bell, the founder of the Madras or Monitorial system. Under the Scotch code, students in training colleges (Queen's scholars) may attend a Scottish university during their two years of training; and the authorities of the training college may dispense with their attendance there during such hours as they may deem necessary. The classes of Education in Edinburgh and St Andrews are recognised under this section of the code. The number of Queen's scholars availing themselves of this privilege rose from 33 in 1874, to 149 in 1883; and the total number in the ten years amounted to 1160, or a yearly average of 116.

Scholastic Organisation.—The chief body for the protection of the interests of members of the scholastic profession is 'The Educational Institute of Scotland,' instituted in 1847, and incorporated by Royal Charter in 1851. Its membership includes teachers, both male and female, of every grade, from teachers in elementary schools to university professors. A 'Burgh and Parochial Schoolmasters' Widows' and Children's Fund' was established by Act of Parliament in 1807. There is also a 'Scottish School-book Association' for the publication of class-books, and for promoting the interests of the profession.

Authorities.—The Minutes of the Committee of the Privy Council on Education, from 1839; the Annual Blue Books of the Scottish Education Department; the Report of the Commission of Inquiry, 1867; the Reports of the Board of Education for Scotland, 1874-78; the Report of the Universities Commission, 1837; the Report and Ordinances of the Universities Commission, 1858; the Report of the Universities Commission, 1878; the Report of the Endowed Institutions Commission, 1869; the First Report of the Educational Endowments Commission, 1884; James Grant's *History of the Burgh Schools of Scotland*, 1876; Sellar's *Manual of the Education Acts*, 7th edit., 1879; Craik's *Education and the State*, 1883; Cassell's *Educational Year Book*, 1881-84; Sir J. Kay Shuttleworth, *On Public Education*, 3 vols., 1853; H. Mann, *Education in Great Britain*, 1854; J. S. Blackie, *On the Advancement of Learning in Scotland*, 1855; J. Lorimer, *The Universities of Scotland, Past, Present, and Possible*, 1854; Voigt, *Mittheilungen über das Unterrichtswesen Englands und Schottlands*, 2d edit., 1863; Sir Alexander Grant's *Story of the University of Edinburgh*, 1884; Harrison's *Oure Tounis Colledge: Sketches of the History of the Old College of Edinburgh*, 1884; *The Calendars of the Scottish Universities*; S. S. Laurie's *Primary Instruction in Relation to Education*, 3d edit., 1883; J. M. D. Meiklejohn's *Life of Andrew Bell*, 1881; Steven's *History of the High School of Edinburgh*, 1849; Steven's *History of George Heriot's Hospital*, continued by F. W. Bedford, 1859; Dalgleish's *High School of Edinburgh*, 1857; George Combe's *Education: Its Principles and Practice*, edited by W. Jolly, 1869; *The Museum: a Journal of Education*, 1862-69.

XV. ADMINISTRATION.

By H. A. Webster, of the *Encyclopædia Britannica.*

The administrative divisions of Scotland, both civil and ecclesiastical, are far from forming a simple and well-ordered system. They have come to be what they are through the action of very various and discordant influences, the origin and operation of which are frequently lost beyond the reach even of antiquarian research. That the country as a whole was at any given period regularly partitioned off like a tract of government land in a Western State or an Australian colony into so many convenient lots, which were again divided into suitable subsections, is an idea that must at once be discarded. According to the system introduced into France after the Revolution, a department is a group of arrondissements, and an arrondissement a group of communes, the lesser divisions fitting into the larger like so many drawers in a chest. But in Scotland we have had no great revolution, and we remain mediæval and irregular, except where some modern Act of Parliament, striking athwart all obstructions like an 'improvement' street in an old-fashioned city, has, at the expense of a few additional anomalies, produced a certain amount of simplicity and uniformity. In Scotland the country is not a group of parishes, and the parish, whether civil or ecclesiastical, has no organic relation to the districts under municipal authority. Though the ecclesiastical have exercised a great influence on the civil divisions and subdivisions (as may be observed on a superficial comparison of a 13th century ecclesiastical map with a modern representation of the counties), the two systems seldom coincide.

The civil parish, or parish *quoad omnia*, is the unit area for poor-law administration and registration of population throughout the country, and for public-health administration in rural districts. In 1652 there were 980 of such parishes. At the census of 1871 there were 887, ranging in area from Kilmallie with 284,060 acres, to Queensferry with 11 acres; and in population from the Barony (Lanarkshire) with 222,927 inhabitants, to Cranshaws (Berwickshire) with 142. About 160 had more than 4000 inhabitants, and 280 less than 1000. By 1881 the census number of parishes had increased to 894, mainly through changes in Glasgow and Edinburgh; the Barony had 264,509 inhabitants, and Cranshaws 106. The boundaries of parishes, except in certain modern instances, are not officially registered, and they have often been the subject of dispute before the Court of Session. New parishes are erected under the provisions of what is known as Graham's Act (7 and 8 Vict., c. 44). They may either be *quoad omnia*, *i.e.*, civil and ecclesiastical, or *quoad sacra*, *i.e.*, ecclesiastical only. *Quoad sacra* parishes leave the civil rights and liabilities of the landowners (heritors) practically the same as before, except when, as was the case in the Education Act of 1872, they are taken as the basis of special civil enactments. The landowners of every parish are bound to provide and maintain a church, a churchyard, a manse, a glebe, and minister's grass; and by Acts passed in 1862 and 1866 they may impose an assessment for ten years for such purposes. Formerly poor relief was jointly in the hands of the heritors and the kirk session (a mere church court); but the great majority of parishes have adopted an assessment and a parochial board under the Poor Law Amendment Act of 1845.

The larger administration districts are called either counties or shires: the name of Stewartry still applied to Kirkcudbright having ceased to have any practical import since the abolition of hereditary jurisdictions in 1746-47. The institution of sheriffdoms is as old at least as David I., and twenty-five are mentioned in an ordinance of 1305. Their number and grouping have been frequently modified. While on the one hand, for instance, we find Caithness, Sutherland, and Ross under the jurisdiction of the Sheriff of Inverness as late as 1641, on the other hand, Elgin and Forres were formerly separate sheriffdoms; Linlithgow and Haddington were constabularies under the sheriffdom of Edinburgh; Stratherne formed a county palatine; and so on. At present, the counties are thirty-three in number, Ross and Cromarty being treated as one, and Orkney and Shetland as two or *vice versa*. Ross, an ancient hereditary sheriffdom, has still a court of lieutenancy of its own and separate commissioners of supply. The detached districts, which look so strange on the modern map (where the two counties are usually coloured differently), were annexed to Cromarty at the instigation of Viscount Tarbat, afterwards Earl of Cromarty, who wished to have jurisdiction over the various parts of his estates. By the Reform Act of 1832, those detached portions of Ross, and similar *enclaves* in other counties, were for parliamentary representation made part of the county in which they are situated; and the County Police Act, 1857, the General Assessment Act, 1868, etc., have followed the same rule. For purposes of registration the areas of all counties have been altered since 1854, and thus we have Registration Counties as distinguished from Civil Counties. Part of a

police burgh may be transferred from one county to another for the purposes of the Police Act of 1862. The following table shows the area of the thirty-three civil counties :—

TABULAR STATEMENT SHOWING THE AREAS OF LAND, WATER, AND FORESHORE OF THE COUNTIES OF SCOTLAND.

	Area in Statute Acres.			Total Area of County.	
	Land.	Water.	Foreshore.		
Shetland and Orkney,	593,354	19,295	25,683	638,332	
Caithness,	438,878	7,271	2,718	448,867	
Sutherland,	1,297,849	49,185	12,812	1,359,846	
Ross,	1,768,560	65,558	27,454	1,861,572	including 440,822 acres, the area of the Islands of Ross-shire.
Cromarty,	201,444	8,656	7,224	217,324	including 29,997 acres, the area of the Islands of Cromartyshire.
Inverness,	2,616,544	91,693	58,841	2,767,078	including 821,579 acres, the area of the Islands of Inverness-shire.
Nairn,	124,968	950	1,988	127,906	including 19,867 acres, the area of the Islands of Nairnshire.
Elgin,	304,606	3,761	3,979	312,346	
Banff,	410,112	2,146	1,533	413,791	
Aberdeen,	1,251,451	7,059	3,588	1,262,097	
Kincardine,	245,347	1,463	1,385	248,195	
Forfar,	560,186	3,179	6,486	569,851	
Perth,	1,617,808	38,274	8,608	1,664,690	
Fife,	315,007	1,082	12,338	328,427	
Kinross,	46,485	3,327	.....	49,812	
Clackmannan,	30,476	945	455	31,876	
Stirling,	286,338	8,947	3,294	298,579	
Dumbarton,	154,542	14,321	3,814	172,677	
Argyll,	2,056,402	36,056	41,816	2,134,274	including 398,890 acres, the area of the Islands of Argyllshire.
Bute,	139,432	895	3,670	143,997	
Renfrew,	156,785	3,622	2,021	162,428	
Ayr,	722,229	6,957	6,076	735,262	
Lanark,	564,284	4,557	27	568,868	
Linlithgow,	76,799	456	3,858	81,113	
Edinburgh,	231,725	878	2,323	234,926	
Haddington,	173,447	190	5,505	179,142	
Berwick,	294,805	1,557	799	297,161	
Peebles,	226,899	970	.....	227,869	
Selkirk,	164,545	1,979	.....	166,524	
Roxburgh,	425,657	2,807	.....	428,464	
Dumfries,	680,217	5,302	20,427	705,946	
Kirkcudbright,	575,303	7,679	27,361	610,343	
Wigtown,	310,747	2,829	14,330	327,906	
	19,063,231	403,846	310,413	19,777,490	

Subdivisions of the counties are legally recognised only in a few instances, and that sometimes only for special purposes: thus Lanark has long been divided into an Over or Upper, a Middle, and a Nether or Lower Ward, and the Lower Ward has been subdivided into two districts, each of the four districts thus produced being a separate assessment area, and in connection with the roads a separate 'County;' Ayr, in like manner retains the old threefold division into the bailiaries of Carrick, Kyle, and Cunningham. In most instances the older subdivisions when such existed, have passed into desuetude and oblivion, or linger, as matters of every-day convenience, in the popular speech. We are still familiar with the districts of Lorne and Cowal and Kintyre, with the Merse and Lammermuir and Lauderdale; but even the antiquary is not certain as to what was meant by the Quarter (or District) of the Seven Shires of Perth.

The highest county official is the Lord-Lieutenant, appointed by the crown, and generally selected from the local nobility or gentry. The office, first created by the Militia Act, 42, George III. (1782), is honorary, and involves little real participation in the administration of

the county, though the holder is also high sheriff, a member of the police committee, etc. A much more responsible and efficient functionary is the salaried sheriff, appointed by the crown for the discharge, either personally or by means of his legal substitutes, both of judicial and administrative duties. He is not required to be resident in his sheriffdom, but he must hold a certain number of sittings in the county or counties entrusted to him. By Act 16 and 17 Vict., cap. 92 (1853), it was arranged that as sheriffdoms fell vacant, Sutherland should be joined with Caithness, Banff with Elgin and Nairn, Linlithgow with Clackmannan and Kinross, Dumbarton with Bute, Haddington with Berwick, Roxburgh with Selkirk, and Wigtown with Kirkcudbright. But in 1870, by 33 and 34 Vict., cap. 86, a new grouping was introduced :— Aberdeen, Kincardine, Banff; Inverness, Elgin, Nairn; Orkney, Shetland, Caithness; Sutherland, Ross, Cromarty; Midlothian, Linlithgow, Haddington, Peebles; Wigtown, Kirkcudbright, Dumfries (Sheriffdom of Dumfries and Galloway); Stirling, Dumbarton, Clackmannan; Renfrew, Bute. As some of the changes were to take place only when certain sheriffdoms fell vacant, they are still prospective.

Many of the duties of the sheriff (who is the special guardian of the public peace) can be discharged by the sheriff-substitutes, who must reside within the county, and must not be absent more than a fortnight at a time. They are judges in first instance in all sheriff courts. Among their administrative functions are arranging for the election of members of parliament and return of writs, summoning jurors for causes civil and criminal in the supreme courts, striking the fiars prices, and determining the boundaries of police and improvement burghs. The procurator-fiscal is the public prosecutor in the inferior courts; and as in the sheriff court he makes inquiry into cases of sudden death, he is now the nearest representative in Scotland of the English coroner, though Scottish coroners appear down to the time of Charles II. Justices of peace (J.P.), appointed by commission under the Great Seal, are unpaid officials—elected without regard to rank or property—on whom devolves a large amount of administrative work. They hold quarter sessions on the first Tuesday of March, May, and August, and the last Tuesday of October; they take affidavits (depositions) and declarations, sign warrants, try petty criminal cases, regulate public-house licences, licence retreats for habitual drunkards, look after weights and measures, have the right of performing the marriage ceremony, etc., etc.

Commissioners of supply, incorporated in 1867-68 (31 and 32 Vict., cap. 82, § 8), are entitled to levy county rates. Originally instituted to collect the national revenue, they now settle the incidence of the land-tax, manage the county expenditure, and control the county police. The sheriff-clerk, a paid official, has charge of the ballot-papers after an election, is *custos rotulorum*, etc. The following scheme shows the distribution of county officials in 1885 :

The only true municipal corporations in Scotland are the royal burghs. The origin of these is in great measure lost in the obscurity of our early history, though recent research has considerably extended our knowledge in regard to them. Their name implies that they were created by royal charter, but in many cases there is no evidence to show the date of the first charter, or indeed to prove that a charter of erection ever really existed. They thus fall into two groups—burghs by charter and burghs by prescription. The reign of David I. was a period of rapid growth in this department, and though the charters signed by this monarch are in many cases lost, those of his successor, William the Lyon, take the form of confirmations of the privileges he had bestowed. Among the burghs which claim David as their founder are Edinburgh, Rutherglen, Perth. At present the chief characteristic of a royal burgh is that it is governed by a special body of citizens elected for this purpose by the citizens themselves, and that in most matters of purely local concernment it can exercise a wide discretion. But originally a burgh, while enjoying a corporate existence, enjoyed it rather as a great trading company which possessed a monopoly within a certain district or number of districts. To obtain the freedom of the burgh meant in early times to obtain the freedom of carrying on one's trade or disposing of one's goods. Thus the burgesses of Edinburgh obtained 'not only exemptions and freedoms within their walls, but an exclusive right of trade and manufacture over a district extending from Colbrandspath or Edgebucklin Brae on the east to the water of Avon on the west, corresponding to what was afterwards the sheriffdom of Edinburgh Principal' (Cosmo Innes). A charter of confirmation by David II. under the Great Seal, dated 28th March 1364, which is considered to summarise the general privileges of royal burghs, (1.) grants to the King's burgesses throughout Scotland free liberty to buy and sell everywhere within the liberties of their own burgh, expressly forbidding any of them to buy and sell within the liberties of another without licence obtained; (2.) prohibits bishops, priors, and kirkmen, earls, barons, and others of the temporal estate from buying wool, skins, hides, or other kind of merchandise under any pretext or colour; (3.) prohibits all persons of whatsoever estate from selling anything except to the merchants of the burgh within the liberty of which they resided, and requires them to present every kind of merchandise at the market cross of burghs that the merchants might buy

them and the King's customs be paid; (4.) prohibits outland merchants or strangers arriving in ships from selling merchandise to other than burgesses of royal burghs, and from buying merchandise except from the hands of royal burghs, under pain of the King's unlaw. (See *Miscellany of the Scottish Burgh Records Society*, p. xxv., 1881.)

As early as the reign of David the royal burghs of the North of Scotland formed a hanse (*ansa*) or federation, whose meetings could be held whenever and wherever they chose. The four burghs of Edinburgh, Berwick, Roxburgh, and Stirling already formed a convention or court in the 13th century, if not at an earlier period; and when Berwick and Roxburgh fell into the hands of the English their places were taken by Lanark and Linlithgow. Their meeting-place—previously shifting, though most usually at Haddington—was in 1454 fixed at Edinburgh. In 1487 a general Convention of Royal Burghs was constituted by Act of Parliament 'for dealing with the welfare of merchandise, the gude rule and statutes for the common profit of burrows, and to provide for remied upon the skaith and injuries sustained within the burrows.' In 1633 parliament confirmed the monopolies and privileges of the burghs; but in 1672 their exclusive right to buy and sell was limited to wine, wax, silks, spiceries, woad (wald), and other materials for dyeing; and trade in home-grown corn, 'cattell, nolt, sheip, and horse, coall, etc.,' and all other native commodities of the kingdom were declared leisom (lawful) to burghs of regality and barony. This infringement of their long-established pre-eminence was not accepted by the royal burghs without many and grievous protests; and they afterwards managed in 1689 to get the new law somewhat modified in their favour. The contest between the traditional and the progressive party continued through the rest of the 17th century and on into the next. By article 21 of the Treaty of Union it was provided that 'the rights and privileges of the royal burroughs in Scotland as they now are do remain entire after the union and notwithstanding thereof,' and in 1835 the Commissioners on Municipal Corporations in Scotland had still to report that 'the law in so far as it rests upon statutes continues the same at the present day, with only very trifling modifications; and courts of justice could not even now refuse giving effect to it.' But the world had moved far in advance of the statute-book, and the attempt to enforce these exclusive privileges by means of the law courts was seldom made by any of the burghs. The recommendation of the Commissioners that the obsolete enactments should be abrogated in their entirety, received effect by Act 9 Vict., cap. 17, passed on May 14th, 1846.

As they at present exist to the number of 70, the Royal Burghs are a strangely incongruous company, ranging in population from Glasgow and Dundee, the two largest cities in the country, to petty villages like Culross, Earlsferry, and Kintore. There is something ludicrous in such a community as that of Culross—380 souls all told, inhabiting 99 houses, and holding real property to the value of £1625, being governed by a provost and 9 councillors, who have to administer a corporation revenue of £50, while Glasgow with its population of 541,150, its real property valued at £3,405,000, and its revenue of nearly £50,000, is governed by a provost and 50 councillors. At the same rate as Culross the larger city ought to have 1421 councillors. As a list of the Royal Burghs can be found in such an accessible book as *Oliver & Boyd's Almanac*, it need not be repeated here.

The Government of Royal Burghs is regulated by the Municipal Acts 3 and 4 Wm. IV., cc. 76 and 77, and 31 and 32 Vict., c. 108. The qualified burgesses—practically since 1876 all resident ratepayers—annually elect councillors by ballot, and the council by open voting chooses the magistrates. The number of magistrates and councillors is fixed by the 'sett' or usage of the burgh (see the Complete Copies registered in the Books of the Convention in the *Miscellany* already quoted). In certain burghs a 'Dean of Guild,' or architectural inspector, is appointed by the council. Though the magistrates of Royal Burghs have nominally the same civil and criminal jurisdiction within the burgh as the sheriff, they are practically confined for the most part to the trial of police offences.

A lower class of burghs, known as Burghs of Regality and Burghs of Barony, 'were originally erected by the crown out of territory belonging to lords of regality and barony respectively. The Municipal Commission, 1835, enumerated 12 burghs independent of superior; 7 holding of a superior, but possessing charters; and 24 holding of a superior, and without elected magistrates. The magistrates, when such exist, are in some cases chosen by the superior, in others by electors.

The name of Police Burgh is given to towns and places of more than 700 inhabitants, incorporated in the General Police Acts of 1850 or 1862, or under a special local police act. In 1879 these acts had been adopted in whole or in part by 83 burghs and places other than Royal or Parliamentary Burghs. By 1881 this number had increased to 88, and the total, including Royal and Parliamentary Burghs, was 157. As these acts may be adopted by Royal Burghs, by Burghs of Regality and Barony, and as the limits for the Police Burgh may be fixed by the sheriff so as to include more than the original burgh, and to extend into another county,

we have very different areas represented by the same geographical name. An elected body of police commissioners (not more than 12 or less than 6) attend to the watching, cleaning, lighting, paving, water-providing, and improving of the burgh, to the extent determined by the degree in which the acts have been adopted. Contiguous burghs may unite for the purposes of those acts.

Parliamentary Burghs were up till 1885 all the Royal Burghs with the exception of Auchtermuchty, Earlsferry, Falkland, Newburgh, Rothesay, and Peebles, and the 15 burghs constituted for the purpose of parliamentary representation by the Reform Acts of 1832 and 1868. Compare *infra*, p. 106.

For further information on the administration of Scotland, see the admirable summary, *Local Government* (Edinb. 1880), by Henry Goudy and William C. Smith, which has been largely put under contribution in these pages.

POOR RELIEF.

The civil parish is in all cases the unit of poor law administration, but two or more adjoining parishes may be conjoined. The local authority is a parochial board, comprising so many nominees of the kirk session, and so many persons elected by the ratepayers; and the central authority is the Board of Supervision, consisting of the Lords Provosts of Edinburgh and Glasgow, the Solicitor General, the Sheriffs of Perth, Renfrew, and Ross, and three nominees of the crown. The Parochial Board imposes and levies the poor rate, but not according to one general system. For the year ending 14th May 1884, the total income of the Parochial Boards of Scotland was £927,090, of which £774,650 was raised by assessment, while £48,577 was from voluntary contributions and church collections, etc., £103,863 from the Grant for Lunatic Poor, and from the Grant for Medical Relief. The ordinary expenditure was £869,996, of which £665,993 on maintenance of poor, £39,509 on medical relief, £120,248 on management, and £6365 on law expenses. During the thirty-nine years since the Board of Supervision was formed (August 1845) a large number of parishes have abandoned the method of voluntary contributions for assessment. While the assessed parishes in 1845 were only 230 against 650 with voluntary contributions, the assessed in 1884 numbered 827 and the voluntary 59. 'In 623 of the assessed parishes the funds are raised by an equal rate upon owners and occupants respectively, and in 189 there is a classification of occupants in terms of the 36th section of the Act 8 and 9 Vict., c. 83. In 15 parishes the assessment is still levied according to established usage.' The number of parishes that have poorhouses singly or in combination is 450, and arrangements are in progress by which this number will be increased to 466. The 64 poorhouses in operation provide accommodation for 15,618 inmates, an increase of 2848 since 1864. The following figures show the general growth of expenditure:—

Year.	Expenditure for Relief and Management of the Poor.	Valuation as Returned by Inspector of Poor.	Rate of Expenditure per Head of Population.
	£	£	s. d.
1847	433,915	10,053,142	3 1¼
1850	534,353	10,602,403	3 8¾
1855	584,823	11,517,838	3 11¼
1860	643,303	13,428,403	4 2½
1865	731,855	15,598,386	4 7
1870	818,390	17,804,036	4 10¾
1875	804,916	19,571,152	4 7
1880	849,064	22,263,612	4 7
1881	853,348	22,287,670	4 6¾
1882	844,781	22,689,006	4 5¾
1883	834,657	23,006,697	4 4½
1884	832,115	23,388,500	4 3¾

While the expenditure has thus increased, the number of registered and casual poor has been decreasing. In 1866 the former were returned as 76,229, and the latter as 3242; by 1884 they had gradually sunk to 58,346 and 2319 respectively. If we unite the two classes and include their dependants, we find the total for 1866 to be 126,042, and for 1884, 94,642. One department in which the cost has been progressively increasing for many years is the maintenance of lunatic poor: the sum thus expended in 1868-69 was £124,813; in 1883-84, £217,942. The average annual cost of maintenance for each registered pauper in 1859 was (including lunatics) £6, 10s. 7½d., in 1884, £11, 2s. 6¾d. In 1874 there were 22,766 pauper children and 2377 non-pauper children receiving education at the cost of parochial boards to

the extent, respectively, of £11,662 and £560; the two classes had increased by 1884 to 26,591 pauper children and 15,545 non-pauper children, and the expenditure to £15,969 and £8044.

LUNACY.

In Scotland the chief supervision of the insane is vested in the Commissioners of Lunacy, whose action is controlled by Acts 20 and 21 Vict., c. 71, 24 and 26 Vict., c. 54, and 29 and 30 Vict., c. 51.

According to Table I. of Appendix A. in the 26th Annual Report of the Board of Commissioners, the number of lunatics in Scotland was as follows:—

1858, . .	5769	1872, . .	7667	1877, . .	8651	1881, . .	9,762
1860-65, av. .	6353	1873, . .	7797	1878, . .	8886	1882, . .	10,095
1866-70, ,, .	6975	1874, . .	7885	1879, . .	9158	1883, . .	10,244
1870-75, ,, .	7787	1875, . .	8033	1880, . .	9384	1884, . .	10,458
1871, . .	7555	1876, . .	8309				

According to the census returns for 1871 and 1881, the number in lunatic asylums and wards for those years was 6027 (2925 males and 3102 females) and 8406 (3939 males and 4467 females). The ratio to the population, according to the first authority, was, in 1859, 157 per 100,000, and in 1881, 267; for the latter date the census rate is 225 per 100,000. It is pretty generally allowed that the increase is for the most part only apparent, and due to improved systems of registration. The ratios for England and Ireland are heavier.

SANITARY ENACTMENTS.

The Drainage, Sewerage, and Water Supply of Burghs were provided for by the General Police Acts of 1850 and 1862, and in 1867 a Special Public Health Act (amended 1879) provided for the erection of sanitary districts, both rural and urban, and for the appointment of proper officers for the inspection and removal of nuisances (including the erection of permanent hospitals), the prevention and mitigation of diseases, the regulation of common lodging houses, and the management of sewerage, drainage, and water supply. Since 1871 all places containing a town or village of 2000 inhabitants are bound to have a sanitary inspector. The total expenditure under the Public Health Act from 15th August 1867 to 14th May 1884, was £2,042,008, of which £278,937 was expended upon drainage, £788,374 upon water supply, and, in the last ten years, £364,174 upon hospitals. The Board of Supervision received in that period 222 applications from local authorities for recommendations to the Public Works Loan Commissioners, of loans to the proposed extent of £1,240,465. The loans actually recommended amount to £1,179,536.

GOVERNMENT.

To tell by what gradual changes the different portions of Scotland were united under a central government, and by what varying methods the mutual relations of rulers and subjects were adjusted, belongs to the chapter on Scottish History. To understand the present position of the country, it is enough to recall that after being for 105 years linked together by allegiance to the same dynasty, the twin realms of England and Scotland were merged in the larger unity of Great Britain by the Act of Union in 1707. The last session of the Scottish Parliament closed on 25th March; and the First Parliament of Great Britain with Scottish Representatives was opened on 23d October. A bill for 'rendering the Union of the Kingdoms more complete,' abolished in 1708 the Scottish Privy Council. Before long a Secretary of State for Scotland, with a seat in the Cabinet, was appointed in addition to the two Secretaries for England; but the office, which had frequently been almost nominal, was allowed to lapse in 1746, and the law officers of the crown, the Lord Advocate and Solicitor-General, became, along with the Justice-Clerk, the principal advisers of the Government, which, however, down to 1827, continued to be generally represented by a 'Scottish Manager.' The political functions of the Lord Advocate, though he has no seat in the Cabinet, gradually increased, and at the present time he and the Home Secretary of Great Britain are practically Ministers for Scotland. Complaints about the neglect and mismanagement of Scottish business have been often made; and a movement, originating as far back as 1855, for the re-institution of the office of Scottish Secretary appears at length on the eve of attaining its object (compare two articles in *The Scotsman* for March 26 and 27, 1885). The officers of state for Scotland in recent times are the Keeper of the Great Seal, the Lord Privy Seal, the Lord Clerk Register, the Lord Advocate, and the Lord Justice-Clerk, who act as commissioners for the custody of the Regalia, preserved in Edinburgh Castle.

PEERAGE.

The Union Roll laid before the House of Lords, December 22d, 1707, is still with certain amendments the document which regulates the precedence of the Peers of Scotland, and is called, with certain omissions and additions, at all elections of Representative Peers. It originally contained 154 Peers (10 Dukes, 3 Marquesses, 75 Earls, 17 Viscounts, and 49 Barons); but though 11 Peers then omitted have since been added, the number has been gradually reduced by certain peerages becoming extinct or dormant, and as the crown did not receive at the Union the prerogative of creating new Scottish Peerages they are destined to become yet fewer. At present there are 88 Scottish Peers (8 Dukes, 4 Marquesses, 44 Earls, 1 Countess, 5 Viscounts, 25 Barons, and 1 Baroness). A Scottish Peer may also be a Peer of England, and as such have a permanent seat in the House of Lords, where, however, he may appear in virtue of a much lower title than that by which he is generally known. Thus the Duke of Athole is in the House merely Earl Strange, the Duke of Buccleuch is Earl Doncaster. Or, on the other hand, the title by which he sits in the House may be a higher one than that by which he ranks in the Scottish Peerage. Thus the Marquess of Ailsa is entered in the Scottish Roll as Earl of Cassillis.

PARLIAMENT.

The Scottish nobility, since the Union, return from among their own number 16 peers to represent them in the Upper House of the Imperial Parliament, and since 1831 no attempt has been made by the governments to influence their decisions by sending down, as was done by Walpole and his successors, a King's or Court List. Little political significance is now attached to the election. Between the Union and the date of the Reform Bill, the freeholders of the counties, who amounted even at the last to only 3211 in number, returned to the House of Commons 30 members; the city of Edinburgh returned 1; and the other royal burghs, 65 in number, and classified into districts, returned 14—a total of 45. The Parliamentary Reform Act in 1832, by conferring the franchise on owners of property of £10 a year and certain classes of leaseholders, added at the first impulse 29,904 to the aggregate constituency of the counties; but it allowed them only the same number of representatives as before,—erecting Kinross, Clackmannan, and some adjoining portions of Perth and Stirling, into one electoral district, conjoining Cromarty with Ross, and Nairn with Elgin, and assigning one member to each of the other counties. The same act erected various towns into parliamentary burghs, and bestowed the burgh franchise on £10 householders as in England, thus increasing the burgh constituency from a pitiful number to upwards of 31,000, giving them the election of 23 instead of 14 representatives. The total number of Members of Parliament for Scotland was thus raised to 53. By the Scottish Reform Act of 1868, this was increased to 60, three new members being given to the counties, two to the universities, and two to cities and burghs. The county franchise was at the same time extended to owners of lands and heritages of £5 yearly value, and to occupiers of the rateable value of £14 (thus at once increasing the voters from 50,882 to 76,796); and the burgh franchise to all occupiers of dwelling-houses paying rates, and to tenants of lodgings of £10 annual value, unfurnished (thus at once increasing the voters from 59,560 to 163,453). In 1884 the county electors were 100,788 (about 1 in 20 of the population), and the burgh electors 217,457 (about 1 in 7½ of the population). The universities had 13,021 electors (Edinburgh and St Andrews, 6583; and Glasgow and Aberdeen, 6438). In 1884 a new measure for extending the franchise, first introduced by Mr Gladstone on 28th February 1884, was the cause of a great struggle between the House of Lords (who were hostile to the change) and the House of Commons and the country at large. It was ultimately passed on Dec. 12, and, as the 'Representation of the People Act of 1884,' provides for a uniform household franchise and a uniform lodger franchise throughout the United Kingdom for both burgh and county, the right of voting going with the occupation of any land or tenement of a clear yearly value of £10. By this act it was estimated that 200,000 persons in Scotland would be added to the register. The early part of Session 1885 was devoted to the passing of a Redistribution Bill, urged by the House of Lords as an integral part of the franchise-extension scheme.

As matters stood at the beginning of 1885, the counties of Argyll, Banff, Berwick, Bute, Caithness, Clackmannan and Kinross, Dumbarton, Dumfries, Edinburgh, Elgin and Nairn, Fife, Forfar, Haddington, Inverness, Kincardine, Kirkcudbright, Linlithgow, Orkney and Shetland, Peebles, Perth, Renfrew, Ross and Cromarty, Roxburgh, Stirling, Sutherland, and finally Wigtown, had each one member (26 in all); those of Aberdeen, Ayr, Lanark, had two each; the city of Aberdeen had one, Dundee and Edinburgh two, Glasgow three, Greenock one, and Paisley one; and one was given to each of the following groups of burghs:—*Ayr Burghs*

(Ayr, Campbeltown, Inveraray, Irvine, Oban), *Dumfries Burghs* (Dumfries, Annan, Kirkcudbright, Lochmaben, Sanquhar), *Elgin Burghs* (Elgin, Banff, Cullen, Inverurie, Kintore, Peterhead), *Falkirk Burghs* (Falkirk, Airdrie, Hamilton, Lanark, Linlithgow), *Haddington Burghs* (Haddington, North Berwick, Dunbar, Jedburgh, Lauder), *Hawick Burghs* (Hawick, Galashiels, Selkirk), *Inverness Burghs* (Inverness, Forfar, Fortrose, Nairn), *Kilmarnock Burghs* (Kilmarnock, Dumbarton, Port Glasgow, Renfrew, Rutherglen), *Kirkcaldy Burghs* (Kirkcaldy, Burntisland, Dysart, Kinghorn), *Leith Burghs* (Leith, Musselburgh, Portobello), *Montrose Burghs* (Montrose, Arbroath, Brechin, Forfar, Bervie), *St Andrews Burghs* (St Andrews, Anstruther—Easter and Wester, Crail, Cupar, Kilrenny, Pittenweem), *Stirling Burghs* (Stirling, Culross, Dunfermline, Inverkeithing, Queensferry), *Wick Burghs* (Wick, Cromarty, Dingwall, Dornoch, Kirkwall, Tain), *Wigtown Burghs* (Wigtown, New Galloway, Stranraer, Whithorn).

The following changes are effected by the Redistribution Bill :—Lanarkshire is to have *six* instead of *two* members, and Perth and Renfrew shires *two* each instead of *one;* the city of Aberdeen *two*, Edinburgh *four*, and Glasgow *seven;* and the Haddington and Wigtown Burghs are to be merged in their respective counties.

LAW COURTS.

The supreme civil court, a court both of law and of equity, is the Court of Session. This originated in the reign of James V., and was modelled on the Parliament of Paris, but it was modified at the Union, and has been materially altered since the commencement of the present century. An account of its constitution, together with notices of the other metropolitan civil courts, has been given in our article on Edinburgh, vol. ii., pp. 531, 532. The supreme criminal is the High Court of Justiciary, consisting of the Lord Justice-General or the Lord Justice-Clerk and five other judges, who also are judges of the Court of Session. This court sits in full at Edinburgh, as occasion requires, for the three Lothians and for reference-cases from the rest of Scotland; and it holds regular circuit courts, by distribution of its members, at Jedburgh, Dumfries, Ayr, Glasgow, Inveraray, Stirling, Perth, Aberdeen, Dundee, and Inverness. In 1885 there were 361 members in the Faculty of Advocates, but a large proportion of this body abstain from all professional work. The inferior courts of law are the bailie courts in burghs, and the sheriff courts and justice of peace courts in counties. The magistrates of burghs vary in title and number, according to the set of each burgh; but the magistrates of counties comprise, in every instance, lord-lieutenant, deputy-lieutenants, sheriff, sheriff-substitute, and justices of peace.

POLICE FORCE.

The police of Scotland is divided into county police and burgh police. The Commissioners of Supply manage the police force in each county by means of a police committee, and the necessary expenses are defrayed by a special assessment. The commissioners are subject to the control of the Government; and if the Crown inspector refuse a certificate of efficiency to the force of any district, the Treasury subvention is refused. Burghs with a population not exceeding 5000 are required to consolidate with the county in order to get the subvention, and there are only three such burghs which now maintain a separate force. A new Burgh Police and Health Bill is at present before the House of Commons.

In certain burghs the police is regulated by special local acts, but in most cases burghs with a population of 7000 or upwards maintain their constables under the terms of the General Police and Improvement Act of 1862. Falkirk, Helensburgh, Kirkintilloch, Peterhead, and Thurso have been merged in their respective counties, but formed into separate police districts. The police burghs of Broughty Ferry, Dunoon, Govanhill, Hillhead, and North Berwick are also separate police districts. In 1879 there were thirty-three, in 1884 thirty-seven, burghs with a separate police force. The following figures show the number and cost of this department in county and burgh :—

Year.	Numbers.			Cost.		
	Counties.	Burghs.	Total.	Counties.	Burghs.	Total.
1879	1322	2340	3662	£119,015	£185,956	£304,972
1880	1331	2371	3702	125,134	191,278	316,421
1881	1371	2377	3748	125,580	199,560	325,140
1882	1402	2385	3787	131,372	200,347	331,719
1883	1480	2452	3932	133,206	208,455	341,661
1884	1455	2292	3747	...	...	...

CRIME.

The criminal law of Scotland has gradually been assimilated to that of England, though as late as 1855 a return obtained at the instance of J. Boyd Kinnear showed that capital punishment was retained in Scotland for twenty-five crimes for which it was not inflicted in England. An Act for the collection of Judicial Statistics of Scotland was passed in 1869; and the first report was presented by John Hill Burton in 1870. The following tables show the satisfactory progress the country has made in the repression of crime:—

	Average 1836-40.	1869.	1879.	1880.	1881.	1882.	1883.	Average 1879-83.
Committed for trial or bailed,	3350	3510	2945	2818	2650	2692	2719	2765
Tried,	2789	2922	2357	2326	2081	2198	2163	2225
Convicted,	...	2592	2091	2046	1832	1943	1916	1966
Sentenced to death,	2⅘	...	...	...	1	1	3	1
Penal servitude,	...	217	182	131	161	177	179	166

Offences.	Average 1836-40.	Average 1846-50.	Average 1874-78.	Average 1879-83.	1883. Males.	1883. Females.	1883. Total.
Against person,	751	835	924	800	717	118	835
Against property, with violence,	530	537	492	525	428	68	496
Against property, without violence,	1676	1883	1137	954	628	262	890
Against property, malicious,	47	64	121	100	64	2	66
Forgery, etc.,	120	137	39	52	37	5	42
Other offences,	266	239	109	126	156	12	168
	3390	3695	2822	2557	2030	467	2497

If we make allowance for the increase of population between 1840 and 1883, we find that, if no improvement had taken place, 4949 cases might have been expected at the latter date. The average daily number of criminal prisoners in the prisons was, in 1841, 1964, and in 1881, 2642; and of civil prisoners, 97 and 24.

XVI. HISTORY.

By William Melven, M.A.

Though Scotland, in its modern extent, had in reality no existence till the long war of independence, and some parts of the realm were not firmly united to the main body till later dates, it will be convenient to employ the name as if it had at all times signified the whole territory meant when the word is now used. Taking it in this sense, the earliest inhabitants of the country of which we have any trace belonged to a non-Aryan race resembling the Iberians and the Aquitani, short in stature, with long heads—the extra length being occipital,—dark hair, and dark skin (*Dolichocephalic Melanochroi*). Latterly, at all events, they used polished stone implements, lived in caves, and buried their dead in caves and chambered tombs. Their typical Continental representatives are the Basques; and in Great Britain their descendants, but little altered in appearance, may still be found in the small, dark-haired, black-eyed natives of Wales, of the North-West Highlands, and of Ireland west of the Shannon. Long, however, before we have any historic notice of the country, these early inhabitants had been pushed away to the more inaccessible and mountainous districts to the west and north by the incoming of a Celtic Aryan race, Gaidhels (Gaels) or Goidels, from whom are descended the great mass of the Gaelic-speaking inhabitants of Ireland, the Isle of Man, and the north of Scotland, and these, in their turn, had been subjected to the same process of pressure to the west and north by a fresh wave of Aryans, Britons or Brythons, Celts also, but speaking a different dialect,

which is now represented by the language spoken in Wales. The first invaders were probably, though it is little more than a matter of supposition, bronze users; and the second, tribes who had found out how to make iron. They buried their dead in round barrows. Physically, both races would seem to have resembled one another, and to have been tall, fair-haired, blue-eyed, with round heads and rugged features (*Brachycephalic Xanthochroi*).

Historically, the first mention of Great Britain seems to take place about 330 B.C., when Pytheas, a celebrated mathematician of Marseilles, in the course of a long voyage of discovery, undertaken at the request of some merchants of Marseilles, who wished to extend the trade of the port, visited the north-east of Scotland as well as the south-east of England. But such fragments of his writings as now remain deal more with the latter part of the country, so that the first authentic written notices of Scotland must be considered to be those in Latin authors subsequent to A.D. 70, when, part of England having, under the Emperor Claudius, twenty years before, become a province of the Roman Empire, the territories of the Brigantes became subject to the Roman power. Space is here wanting for a particular account of the whole of these scattered and often very brief notices, and all that can be attempted is a very condensed account as to the results to which they lead.

When the Romans reached Britain, they must have found the country divided only among the three races already mentioned, for, though the Belgæ held part of the south of England, this branch of that race seems to have belonged to the purely Celtic portion of it, and not to that in which there was an admixture of German blood. The Belgic element probably did not extend far northwards in England, and certainly never found its way into Scotland. Some authors, founding on the passage in Tacitus' *Agricola*, where he says 'Rutilæ Caledoniam habitantium comæ, magni artus, Germanicam originem asseverant,' have maintained that there were also in the latter part of the first century settlements of Germans to the north of the Forth, but it is now accepted as true that in physical characteristics the Celts or Gauls and the Germans closely resembled one another, and the only inference that can be drawn from the passage is that the particular tribe referred to by Tacitus in the words quoted were men of better physique and brighter-coloured hair than those he had come in contact with farther to the south. The Brythons occupied in Scotland the district from the Border northward along the east coast and across the Firth of Forth to the line of the Fife Leven and the upper waters of the Earn. Westward their boundary was the southern half of Loch Lomond and the river Leven down to the Clyde, and then the Clyde and the Firth of Clyde till about Ayr, where the line turned back eastward along the watershed between the Nith, Annan, and Esk on the south, and the Clyde and Tweed on the north. Of this territory the part along the upper waters of the Tweed seems to have belonged to the Brigantes proper, and the portion along the east coast from about Edinburgh to the Tweed to a sub-section of them known as the Otadini, whose possessions also crossed the Border. All the rest of the Brythonic territory was held by a tribe known as the Damnonii or Dumnonii. The portion of the country to the south-west of the Brythons in the modern counties of Wigtown, Kirkcudbright, and Dumfries belonged to the Goidels, whose possessions extended also round the head of the Solway Firth and along the west coast of England as far as Morecambe Bay. They were divided into the Selgovæ in the north—whose name is supposed still to survive in the name of the firth—and the Novantæ in the south. The Goidels also practically held the whole of the district from sea to sea between the northern boundary of the Damnonii and the Mounth, while the older races who held the territory between the Mounth and the Moray Firth had become so mixed with them as to be practically Celtic in everything but origin. To the north of the Moray Firth and the west of the Great Glen the pre-Celtic Iberians had probably retained more of their native customs, but they were so dominated by the power of their Celtic neighbours, that they must have at least spoken some form of the Celtic dialect, the greater number of place-names now remaining being undoubtedly Celtic as far north as Sutherlandshire,—the non-Celtic names in a portion of that county and in the greater part of Caithness being of much later date. The positions and names of the tribes, as far as can be made out from Ptolemy and other sources, were the Epidii in Kintyre and along the west coast as far as Ardnamurchan—the district including a considerable number of inhabitants of Iberian descent; the Caledonii from Bute northwards to the Inverness Basin and Beauly Firth; the Vacomagi from the upper waters of the Earn northward to the Inner Moray Firth; the Vernicomes along the east coast from the Firth of Tay to the river Dee; the Taexali between the Dee and the Deveron; the Decantæ from the west side of Loch Ness to the Dornoch Firth; the Lugi in the centre and east of the modern county of Sutherland; the Smertæ along the east coast of the modern Caithness; the Cornavii along the north coast of Sutherland and Caithness, and possibly also the Orkneys, though there may have been there another tribe whose name is unknown; and a tribe known as the Cerones, Creones, Carnonacæ or Carini, all along the west coast from Cape Wrath to Ardnamurchan, and possibly also

in the Inner and Outer Hebrides. The Selgovæ seem to have had a considerable admixture of the pre-Celtic race among them, and they and the Novantæ appear later as Genunians, later still as the Atecotti, and finally as the Picts of Galloway. The Vernicomes seem to be the same as the Meatæ; and the Goidelic portion of the Caledonii, Vacomagi, and Vernicomes south of the Mounth are probably the Caledonii of Tacitus. After the construction of the so-called Antoninus' Wall between the Clyde and the Forth the Damnonii were cut in two, and the portion of the tribe to the north as well as the inhabitants of Fife were probably the body that subsequently appears as the Horestii or Borestii, again as the Vecturiones or Verturiones, and finally as the Men of Fortrenn.

We have already seen that the Brigantes, the greatest and most powerful tribe of the Brythons, were finally reduced to subjection in A.D. 70, the conquest being effected by Petilius Cerealis under the Emperor Vespasian after a severe and bloody contest; and thus part of the south of Scotland became part of the Roman Empire. Before Petilius was, however, able to consolidate the newly acquired dominion, he was succeeded by Julius Frontinus; and as all his attention was given to a war against the Silures in Wales no fresh action in the north was taken till A.D. 79, when Agricola, who had now assumed the chief command in Britain, led his forces northward and constructed stations in the Brigantian territory, while in the following year he penetrated the territory of the Selgovæ, and, passing northwards by Lanarkshire, subdued the Damnonii to the south of the Firth of Clyde, and seems to have pushed on by Stirling as far as the Firth of Tay; but whether he spent the winter in advanced positions beyond the Forth, or retired to the south side for winter quarters, seems somewhat doubtful, probably the latter. At all events the summer of 81 seems to have been spent in constructing a chain of forts across the neck of land between the Firths of Forth and Clyde, so as to protect the greater portion of the newly acquired territory from the incursions of the northern tribes. In 83-86 he again advanced to the north, and though in the last year he gained a great victory at Mons Granpius, probably near the junction of the Isla and the Tay, he was unable to follow up his victory, and recrossing the Tay, returned southward, while the fleet sailed onward round the north. Agricola was recalled in 87, and under his successors the district north of the Forth and Clyde again regained independence, while during the next thirty years even the country to the south seems to have become practically independent, for when Hadrian, in 120, visited Britain, he considered that the northern limit of Roman power should be drawn back to a line between the Solway and the English Tyne, and so formidable does he seem to have considered the attacks likely to be made from the north, that he erected along the border a massive stone wall, strengthened by a ditch on its northern side, and an earthen rampart on the south, with stations, castles, and watch-towers. In the reign of Antonine, however, in 139, Lollius Urbicus, who had been sent for this special purpose, again reduced the tribes to the north of Hadrian's Wall, and constructed a massive earthen rampart between the Firths of Forth and Clyde, probably along the line of Agricola's chain of forts. Formidable as this defence was, the northern tribes broke through it in 182, and were not finally driven back till two years later. A fresh outbreak in 207 drew the Emperor Severus himself to the scene of contest, and in 208 he arrived in Britain, and marching north with a large army, pushed vigorously forward, clearing and forming roads and bridging rivers, so as to render the whole territory of the hostile tribes more accessible at all future times. He penetrated as far as the Moray Firth, and though he fought no pitched battle, he is said to have lost an immense number of men, partly in consequence of hardship, and partly through the tactics of the natives, who harassed his army continually. His operations were so far successful that he compelled the Caledonii and Meatæ to make peace and to give up some territory north of the rampart formed by Lollius Urbicus, to which Severus now added an immense ditch on the northern side, as well as additional posts; but he had hardly returned to York when a fresh outbreak took place, and a war of extermination was only prevented by his death in 211, his son Antoninus at once concluding a peace with the rebellious tribes. Except for the brief usurpation of power by Carausius and his follower Allectus, who seems to have been supported by the Caledonii, almost nothing is heard of Scotland till 360, when the northern tribes began once more to make formidable attacks on the territory within the walls, the Picts—as they are now called—of the north being joined by Scots from Ireland and assisted by the Atecotti, whose territory lay within the Roman province, and by the Saxons who had since the latter part of the third century made frequent descents on the east coast. They were driven back by Theodosius in 369, but on the withdrawal of the Roman troops in 387 the Scots and Picts renewed their attacks; and though they were beaten back by a legion sent by Honorius to guard the northern wall, this was no sooner withdrawn in 402 than their assaults were renewed. They were again driven back by fresh Roman troops in 406, but the respite of the Romanised Britons was brief, for the legions were finally withdrawn in the following year, and in 410 the Roman occupation of Britain came for ever to an end, and the native tribes were left to fashion the destiny of their land in their own way.

The ensuing period of Scottish history is quite a blank, but the various tribes, or rather confederations of tribes, seem to have engaged in a hard struggle for mastery, and when we again find authentic record, somewhere about the beginning of the 7th century, Scotland was divided into four kingdoms held by four different nations, viz., the Picts, Scots, Britons, and Angles. The first held by far the greater portion of the country, their realm extending from the extreme north down to a line drawn through the island of Mull, up Loch Linnhe, eastward from the head of Loch Leven to Drumalban, and thence along this ridge to the line of the Forth, the river and firth of which formed its extreme southern limit. They held also the Orkneys and the greater portion of the Hebrides, and in what may be called the debatable tract to the south of the Firth of Forth, they had settlements about Edinburgh in what was known as Manaw—where they have left traces of their possessions in the name of the Pentland Hills,—and again farther to the south-west in the modern counties of Wigtown and Kirkcudbright, where dwelt the Niduarian Picts or the Picts of Galloway, the descendants of the old Goidelic Selgovæ and Novantæ. The main body of the nation to the north of the line of the Firth of Forth was divided into the Northern Picts to the north of the Mounth, and the Southern Picts between that and the Firth of Forth. The former must have contained, as already noticed, a very considerable admixture of the pre-Celtic inhabitants, while the latter were probably almost purely Goidelic in race, with in the south-west the addition of a district where the inhabitants were of Brythonic descent, and figure prominently in Pictish history as the Men of Fortrenn. How much the different races had, however, become blended into one great nation is shown by the fact that in the end of the 6th century we find the central seat of power and the residence of the king, Brude mac Mailcon, in the neighbourhood of Inverness, while his successor, Gartnait, transferred it to Abernethy on the Tay, probably from some more immediate personal connection with the southern portion of the race, for nothing is known of any revolution. They were in Brude's time converted to Christianity by St Columba about 563, and were then a united and powerful people. The nation seems to have consisted of a federation of small tribal bodies united into powerful district tribes ruled by Mormaers, these again owning allegiance to an Ard-ri, or High King. The succession to this office ran in certain families, but in right of the mother, not of the father, and the transmission of rule was latterly tanistic.

The kingdom of the Scots was almost coextensive with the modern county of Argyll, and was bounded on the north by the line of heights to the north of Loch Leven and the line of the Black Water Lochs; on the east by Drumalban, whence the line struck across the middle of Loch Lomond, across the narrow neck between that and Loch Long, and thence down Loch Long and the Firth of Clyde. Their territory included also a portion of Mull, the whole of Islay and Jura, and all the islands in the Clyde. These Scots were sprung from the Irish branch of the Goidels. How the first colony, which was led across from the district known as Dalriada in the north of Ireland, in the end of the 5th century, by Fergus mac Erc and his two brothers, Loarn and Angus, first obtained footing in the district is not known, but having got it they rapidly spread their power over the whole district, which was portioned out among the descendants and adherents of the three brothers, who became known as the Cinel Gabran—that being the name of one of the grandsons of Fergus,—the Cinel Loarn, and the Cinel Angus. The first held that portion of the Dalriadic kingdom which lies to the south-east of the line of Crinan Bay and Loch Awe; the second the modern district of Lorne, extending from Loch Leven to Craignish Point; and the third Islay and Jura. These subdivisions were in turn split up into smaller tribes. Their power was greatly extended and confirmed by Aidan, the great-grandson of Fergus. The seat of government was at Dunadd near the mouth of the river Add at Crinan Bay. The kingdom of the Britons extended along the west coast from the high ground north of the Endrick southward to the Solway Firth, and thence into England, and seems to have stretched eastward as far as Selkirkshire, where the Catrail may mark the boundary. This people was Brythonic; the seat of government was at Alclwyd, the modern Dumbarton; and probably the succession, based on Roman principle—the Strathclyde Britons being highly Romanised—was in the male line. The portion of this tract inhabited by the Picts of Galloway has been already mentioned. To the east of the Strathclyde Britons, extending from the Firth of Forth southward to the Border, and thence into England, was the kingdom of the Angles of Bernicia, while the district from Edinburgh westward along the Firth of and river Forth was a sort of debatable land between the Britons, Angles, and Picts. The Pictish Manaw has been already noticed; the Britons had a fitful authority over the strip between the boundaries of the kingdom and the river Forth, and the Angles disputed the possession of the strip of Manaw along the coast. Bands of Saxons seem to have begun to form settlements on the east coast as early as the 4th century, and after the Romans quitted the island their numbers and power so greatly increased that they were able to wrest from the Britons considerable tracts of territory. One of these tracts lay along the

south shore of the Firth of Forth, the native leader in the struggle here against the aggressors being probably the original of the great King Arthur. However that may be, a large number of scattered settlements of Frisians and Angles, which had been formed all along the coast between the Tees and the Forth, were in 547 united into the kingdom of Bernicia, by Ida, son of Eobba, and the Teutonic element thus introduced into Scotland has had a very important influence on the national development.

The contest among these four kingdoms for the leading position and final mastery was long and severe, but a full account of the struggle would involve too many and minute details to be here given at length. About the middle of the 7th century a great victory of Oswy, King of the Angles, enabled him to bring both the Strathclyde Britons and the Dalriadic Scots under his power, while the death of Talorcan, King of the Picts, gave him also a pretext for trying to seize the Pictish throne, inasmuch as he claimed to be the next male heir of the late king, who had succeeded to the Pictish crown in right of his mother, but whose father seems to have been Ainfrid or Eanfrid, Oswy's brother, and to have taken refuge among the Picts on the defeat and death of his father at the hands of Aeduin, King of Deira, in 617. His claim not being allowed, he attempted to enforce it by arms, and brought the southern Picts into subjection, and Anglic rule over these three nations lasted till Oswy's death, and during the first part of the reign of his successor Ecgfrid. The northern Picts attempted to recover their lost territory in 672, but the attempt was unsuccessful, and led to the expulsion of Drost, their king, and the election in his room of Bredei mac Bile, whose mother was daughter of Talorcan. Aided by a rebellion of the Dalriadic Scots, who had long been in a state of complete disorganisation, this king and his army made such progress, that in 685 Ecgfrid awoke to the necessity of making a strong effort to crush this threatening opponent, and accordingly led a large army into Pictavia, where he was defeated and slain at Duin Nechtain, which is supposed to be Dunnichen in Forfarshire, the immediate result being that the Picts, Scots, and the Scottish portion of the Britons regained complete liberty. Bredei did not live long to enjoy his power, and the history of the next of the prominent Pictish kings, Nectan, son of Derili, who succeeded in 710, and who established the capital of his kingdom at Scone, is important rather in connection with the ecclesiastical than with the civil history of the kingdom, though his expulsion of the Columban clergy had the effect of placing the Dalriads, who supported their claims, in direct enmity to him, and probably of causing dissensions among his own subjects; for after Nectan became a monk in 724, there seems to have been a feeling of opposition between his supporters and those of his successor, Drust—a feeling that by and by resulted in civil war. After a stubborn contest among the four claimants for power who made their appearance, victory finally lay with Angus or Hungus mac Fergus, who firmly established his power about 730, and in 740 extended his dominion by conquering the Dalriadic Scots, whose kingdom thus became practically a Pictish province. In company with Eadberct, King of Northumbria, he also acquired power over the Strathclyde Britons, and the third king in succession after him, Alpin (775-80), seems also to have ruled over some part of the Saxon district south of the Forth, for in the *Annals of Ulster* he is termed King of the Saxons. Almost immediately after this, the hitherto accepted rule of Pictish succession, which never admitted the son of any former king as eligible for the crown, was broken through in favour of Talorgan, son of Angus, a proceeding which raised disputes between the southern Picts, who accepted his rule, and the northern Picts, who seem to have rejected it, and who, after having a separate king for some time, seem to have at length broken up into large tribes, owning allegiance only to their local rulers, and practically independent of the central authority in the south. This and other quarrels paved the way for a temporarily successful attempt on the crown by Alpin the Scot, sprung from the Cinel Gabran, and probably ruler of a small body of Scots established in Galloway. Paternally descended from Fergus, and of Pictish descent by the mother's side, his claim was supported by all the Scots and by many of the discontented Picts, but the brief promise of power was quickly broken by his death in battle in 832. Kenneth, the son of Alpin, succeeded to his father's claims and ambition, and as the Pictish power was greatly weakened by frequent incursions of the Danes, and in particular by a pitched battle with these in 839, in which the Picts were defeated with heavy slaughter and a number of their leaders slain, this prince was in 842 able to make himself master of Dalriada, where he would doubtless be gladly welcomed by the Scots inhabitants. Two years later, in 844, he 'encountered the Picts seven times in one day,' according to the *Chronicle of Huntingdon*, 'and having destroyed many, confirmed the kingdom to himself,' and thus laid the foundation of modern Scotland, the Scots and Pictish claims for rule being, through his descent, united in his own person. The succession became firmly established in Kenneth's male line, and the sovereigns who had latterly been known as Kings of Scone were now called Kings of Alban.

The loss of Orkney and Shetland, which were about this time taken possession of by the Norwegians, is noticed in the article on Orkney, and the seizure of the islands off the west

coast in that on the Hebrides, so that it is unnecessary here further to deal with the subject. From the Orkneys the Scandinavians spread to the mainland, where they possessed themselves of Caithness and most of Sutherland, so that in the beginning of the 10th century Scotland was divided into the kingdom of Alban proper, which extended along the east coast, from the Moray Firth to the Firth of Forth, with its western boundary marked by the Spey and Drumalban; the modern counties of Sutherland and Caithness, and the islands, all in possession of the Norwegians; Moravia or Moray, north and north-west of the Spey; Argathelia, lying to the west of the great line of watershed from Sutherland to Kintyre; and the portions to the south of the Clyde and Forth which were held as before. Malcolm, who was King of Alban from 942 to 954, tried, but unsuccessfully, to extend his kingdom beyond the Spey into Moray, but in 945 the limits of his power were substantially increased by Eadmund, King of Wessex, who, after overcoming the Strathclyde Britons, handed the rule of the district over to the Alban king, 'on the condition that he should be his co-operator on sea and on land.' In one of his numerous efforts to extend or establish his power in the north, Malcolm was slain, but where is not exactly known, some accounts placing the scene of his death in Kincardineshire, others in Moray. In the reign of his successors the kingdom received a further addition to its growing importance by its establishment in the debatable tract to the south of the Firth of Forth, this being brought about through the surrender of Edinburgh and the district to the west, by the Angles, whose hold there seems to have been always precarious. This extension of territory to the south, led to various attempts to seize the northern part of Bernicia, but none of them were successful till the time of Malcolm II. (1005-34), who in 1018 defeated the Northumbrian army at Carham near Coldstream, and was in consequence enabled to add to his dominions all the district from the Tweed to the Firth of Forth, so that, by the beginning of the 11th century, we find the kingdom—now that of Scotia—extending all along the east coast from the Spey to its modern boundary at the Tweed and Cheviots, while Strathclyde—now Cumbria—maintained a semi-independence, Moravia was practically quite independent, and Sutherland and Caithness, with the islands and all the district to the west of the watershed, were under the sway of the Norwegians.

This Malcolm was the last male descendant of Kenneth mac Alpin, and on his death there was necessarily a fresh struggle for the succession, and this, though it was full of instant trouble, was probably on the whole beneficial for the future welfare of the country. 'Had any male descendant existed,' says Dr Skene, 'there would have been great risk of the territories now composing the kingdom becoming again disunited. As Malcolm had no son, but at least two daughters, who had male issue, Cumbria and Lothian would naturally have passed to the nearest heir in the female line; while a male collateral who could trace his descent from the founder of the family would, by the law of tanistic succession, have had a preferable claim to the regions north of the Firths of Forth and Clyde, forming the kingdom of Alban proper, and would probably have received the support of the Scottish part of the population at least; but the existence of any such male descendant cannot be traced, and the last male scion of the race appears to have been slain by King Malcolm in the year which preceded his own death, probably to make way for the quiet accession of Duncan, his grandson through his daughter, to the whole of the territories which he had united under his sway. He attained his object, for Duncan appears at first to have succeeded him in the whole of his dominions without objection. He appears, however, to have ere long provoked aggression both in the south and in the north.' The struggle in the north, which ended in Duncan's death, the accession of Macbeth to the supreme government of part of the country, and the extension of the Norwegian power to the south of the Moray Firth, and along part of the east coast, is noticed in the article on the Province of Moray, to which reference may be made.

Duncan left a son named Malcolm, who must have been a mere child at the time of his father's death, and who found refuge with his uncle Siward, Earl of Northumbria, who in 1054 advanced with a large army for the purpose of attacking Scotia, and placing his nephew on the throne. A great battle was fought, probably near Scone, and though Macbeth was supported by his subjects, and assisted by his old ally Thorfinn and his Norwegians, Siward seems to have been victorious, but his success was so dearly bought that he was only able to establish Malcolm in possession of the country to the south of the Firths of Forth and Clyde, where we find him reigning over Cumbria and the Lothians for three years, at the end of which time the position of affairs had so greatly changed that he was able to make an independent effort to extend his power over his paternal dominions to the north, and this time so successfully that he totally routed Macbeth, who was driven across the Mounth, and killed at Lumphanan. How this change came about in such a short time cannot now be ascertained, but it probably depended directly on the death of Thorfinn in 1057, for immediately thereafter the Celtic tribes along the east coast threw off the Norwegian government; and many of them would then be able to afford to Malcolm the substantial support which they were unable to give

in the earlier contest. That they were ready to do so is highly probable, as this district was the seat of power of Malcolm mac Kenneth, from whom Malcolm son of Duncan was descended. The early part of his reign the king, who obtained from his subjects the distinctive name of Ceannmor, spent in consolidating his power, and probably also in introducing the first of those changes which were by and by to revolutionise the condition of the land. Hitherto the dominant race, both Picts and Scots, had been Celtic; but with Malcolm's accession the purely Celtic portion of Scottish history may be said to come to an end, for just as Kenneth mac Alpin, representing the royal lines of both Picts and Scots, was able to unite these two nations firmly under his government, so now Malcolm, representing the royal lines of both Scots and Saxons, was fated to unite all the races into one compact whole, in which, however, at this earlier time from the king's youthful Northumbrian training, and thereafter through the influence of his wife, the Teutonic portion of the population was destined to take the leading place. His queen, Margaret, to whom Malcolm was married in 1068, was the sister of Edgar Atheling, and had, along with many other Saxons of royal and noble birth, fled to Scotland for refuge after England had fallen under Norman rule in 1066. Fair and pure-minded, she seems to have exercised—and that for good—a very strong influence over the king; and, as a natural consequence, he was eager to carry out all her wishes, so that her countrymen, who crowded to Scotland in large numbers after the marriage, were received with high favour, and under their guidance the Teutonising of Scottish institutions went on apace. Malcolm's Saxon sympathies led him into war with England, in which he made vigorous efforts to extend his south-eastern frontier to the Tyne, but in vain; and during one of these expeditions in 1093 he was surprised and slain at Alnwick Castle, in Northumberland, while the queen died almost immediately afterwards. He left a kingdom having much the same extent as modern Scotland, except that Caithness and the Orkney Islands were still Norwegian, and the power of the Scottish king in Ross, Argathelia, and the Western Islands was rather nominal than real.

These sudden deaths caused another dynastic struggle, and thus greatly retarded the progress of the country, for the northern races, who had probably looked with no great favour on the Saxonising process that had been going on, seem to have adhered at first to Malcolm's brother, Donald Ban, who, according to tanistic law, was his proper successor; and the *Saxon Chronicle* says that they also 'drove out all the English who were before with King Malcolm.' Donald's claims were, however, disputed by Duncan, son of Malcolm by his first wife, the Norwegian princess Ingibiorg, who had long been a hostage at the English court, but who was now allowed to come north to dispute his uncle's succession—a venture in which, aided as he was by the Normans, and supported by the Saxon and Norse elements in the kingdom, as well as by part of the Celtic population, he was successful. Brief as was his reign—for within six months he was treacherously slain at Mondynes in Kincardine—it was yet long enough to show that the feeling of independence and distinct nationality, which was afterwards to become so marked in the end of the thirteenth and the beginning of the fourteenth centuries, already existed strongly throughout the nation; for the *Saxon Chronicle* says that some of the Scots 'gathered together and slew almost all his followers, and he himself with few escaped. Afterwards they were reconciled, on the condition that he should never again harbour in the land either English or French'—a statement which seems to imply that they considered him as too much under Norman influence, and interpreted by Dr Skene as a probable indication that before Duncan had left London, he had been compelled to acknowledge himself as vassal to the English king for the whole of Scotland—a position which the Celtic portion of his subjects, at any rate, refused to recognise. On his death, rule over the North at once reverted to Donald Ban, who now tried to strengthen his power and disarm the opposition of the Lothians and Cumbria, by associating with him Eadmund, the eldest surviving son of Malcolm by Queen Margaret, who seems to have had Lothian assigned to his rule. The dominion of both came to an end in 1097, when Edgar Atheling drove them out and seated the next of Malcolm's sons, Eadgar (1097-1107), on the throne. The power of the prince did not extend firmly over the whole kingdom; and almost at the commencement of his reign he had to allow the Norwegian king, Magnus Barefoot, to take possession of the Western Islands and Kintyre. Eadgar died in 1107, and the kingdom was for a time once more divided, his next brother, Alexander (1107-24), becoming king over the portion north of the Firths of Forth and Clyde, as well as of the debatable land up to and including Edinburgh; while the youngest brother, David, became ruler of the rest of Lothian and of Cumbria, with the title of Prince of Cumbria. Alexander, who was surnamed the Fierce, seems to have enforced his power vigorously over his rebellious northern subjects; but otherwise, except for a quarrel with the Pope and the Archbishops of York and Canterbury as to the consecration of a Bishop of St Andrews, in which he maintained the independence of his kingdom against all foreign interference, his reign was uneventful.

On his death the whole realm was again united by the accession of David (1124-53), Prince of Cumbria, and, in right of his wife, also Earl of Northampton and Lord of Huntingdon. He

had spent much of his life in England at the Court of Henry I., where, under Norman influence, he had become, as it is put by a contemporary English annalist, thoroughly 'freed from the rust of Scottish barbarity,' and imbued with feudal ideas. He was undoubtedly the greatest of our early kings, and, except during the brief period of his wars with England in support of the claim of Henry's daughter, Maud, to the throne, the whole of the rest of his reign was devoted to the carrying out of wise and well-judged measures for the further extension of the civilisation which, introduced by Malcolm Ceannmor and Queen Margaret, had had its progress so abruptly stopped by their death. To attain this end one of the chief instruments used by David as well as his predecessors was the Church, which was encouraged, by those liberal donations of land which drew from James VI. the melancholy complaint that this monarch was 'ane sore sanct for the crown,' to spread itself over the whole country, and exercise the great civilising influence which it undoubtedly possessed at this early time. The little royal burghs which he established everywhere with such free hand must have also been centres from which 'sweetness and light' passed into the surrounding districts, while in the *Leges Burgorum* drawn up by the king and his advisers for the government of these, we find the first attempt to give Scotland written law. He seems to have brought with him from England a number of Norman friends, and with the aid of these, to many of whom he made large grants of land, he steadily set himself to supersede old Celtic conditions by feudal institutions based on the Norman system. Before these the Saxon influence introduced by Malcolm III. gradually disappeared, and the feudal Scotland thus formed, with Norman ideas as the basis of rule, though much shaken by the results of the Reformation, practically existed till the end of the reign of Charles I. Grievances connected with this introduction of feudalism led in 1130 to a rebellion in the north, headed by Angus, Earl of Moray, and Malcolm, an illegitimate son of Alexander I., but the rebels were defeated by an army under David's cousin, Edward, son of Siward—the king himself being in England—who, 'entering Morafia, now deprived of its lord and protector, obtained, by God's help, possession of the whole of that large territory. Thus, David's dominions were augmented and his power was greater than that of any of his predecessors.' How firm, indeed, was his rule all over Scotland is well shown by the strange combination of races which formed the army with which he invaded England in 1130 in support of the claims of his niece Maud to the English throne, and with which he fought the battle of the Standard. The van was formed by the Picts of Galloway (who appear with their old name for the last time), the second line by the men of Strathclyde and Teviotdale (Britons), the third by the men of the Lothians (Angles), the Islesmen and the men of Lennox (both probably mixed aborigines, Celts and Norse), and the fourth by the Scots and the men of Moray (both Celtic and mostly Pictish). The authority which he had acquired at this early date in his reign, he maintained with a firm hand to the end, for we hear of no further outbreaks against his power, and he was thus enabled to give his attention to the full development of the kingdom, his success in which may be best described in the words of the encomium of George Buchanan—no great lover of kings—who says 'that if the most learned men should strive with all their skill to express the idea of a good king, their minds would fail to conceive such an one as David proved himself to be during the whole course of his life.'

His eldest son Henry having predeceased him, David was succeeded by his grandson Malcolm IV., surnamed the Maiden (1153-65), then a boy of only 12 years of age, who was immediately crowned at Scone. The accession of a minor was at once the signal for an outbreak by Somerled, the petty king of Argathelia, and hardly had peace been made with him when fresh troubles, caused apparently by the idea that Malcolm was too much under control of the English king, and so prophetic of the spirit that was to animate the whole country during the war of independence, took place in central Scotland. Terms were, however, made, and in 1160 the king, young as he was, showed his capacity for rule by repressing further outbreaks in Galloway and Moray, and in 1164 by the defeat of Somerled, who had invaded the district to the south of the Clyde, but who was met and slain at Renfrew, and his army routed by the royal forces. Malcolm died at the early age of twenty-four, and was succeeded by his brother William, surnamed the Lyon (1165-1214), who, during an invasion of England consequent on a quarrel about the earldom of Northumberland, was taken prisoner by the English in 1173,—an event at once followed by a revolt of the Celtic populations in Galloway and north of the Forth against the English and Norman barons who had been placed in their midst as their feudal superiors, and whom they now 'wickedly and ruthlessly slew.' The release of William in the following year put an end to the strife, but he had purchased his liberty at the expense of his independence, for he had agreed to do allegiance to the English king for the whole kingdom of Scotland, an undertaking to which his subjects never consented, and as to which they were indeed never consulted. Considering the temper they had twice already shown that consent would never have been given, and the agreement, such

as it was, though it was thus quite invalid, was nevertheless fraught with future trouble for the country. In 1179 the king, whose northern subjects, ever since his surrender of Scottish independence, had been in a state of veiled or open rebellion and civil war, passed northwards with a large army, and, after settling the country to the south of the Moray Firth, subdued the whole of the great province of Ross, up as far as the Dornoch Firth, this district having hitherto maintained a quasi-independence. He had hardly, however, again returned to the south, when the whole country north of the Spey united in support of a Celt named Donald Ban, who claimed the sovereignty as being directly descended from Duncan, son of Malcolm III.; and a few years afterwards outbreaks took place also in Galloway and in Stratherne. The latter were at once suppressed, but Donald Ban MacWilliam was not put down till 1187, when he was defeated and slain; and when, in 1189, the independence of Scotland was admitted by Richard I., the hostility of the northern Celts was appeased, and in 1196 William was able to add Caithness to his territory, and establish the royal authority in what had previously been an appanage of the Norwegian earldom of Orkney. An easily suppressed insurrection in Ross in 1211 was the only other incident of this long reign.

William was succeeded by his son Alexander II. (1214-49), a young man of seventeen. The early part of the reign of the new king was again disturbed by insurrections in the north, but these were suppressed by Ferquhard Macintagart, afterwards Earl of Ross, the lay possessor of the lands of the old monastery of Saint Maelrubha at Applecross, and in reality a great Highland chief with a powerful following. As part of Macintagart's possessions consisted of the northern part of Argathelia, and as the later rebel leaders had derived a good deal of assistance from the southern part of the province, the king raised a large army and subdued the disloyal portion in 1222. Galloway, which was again in a state of rebellion, was subdued in 1235, and thereafter Alexander determined to wrest the Hebrides from Norway. An account of his operations will be found in the article on these islands, in one of which, Kerrera, the monarch died while the war was proceeding. He was succeeded by his son Alexander III. (1249-85), then only eight years old, and, during the first part of his reign, the war was stopped, but no sooner had he attained his majority than it was again renewed and the islands finally secured for Scotland, by the defeat of Hakon, at the battle of Largs.* The rest of Alexander's reign was peaceful, and under his wise and able rule the country rapidly increased in prosperity —prosperity that was at once checked by the unfortunate death of the king, who was thrown from his horse and killed, as he was riding from Dunfermline to Kinghorn to visit the queen; and that did not resume its course till the time of James I. How great a change passed over Scotland between the accession of Malcolm Ceannmor and the death of Alexander III. has been thus briefly put by Dr Ross in his *Early Scottish History and Literature*:—'Before Malcolm Ceannmor's time Scotland was inhabited by a rural population scattered over the face of the country in mean hamlets and bothies and supporting itself mainly by flocks and herds and by a rude and insignificant agriculture. Architecture was unknown; commerce did not exist; religion and learning were dead. Before the death of Alexander III. had left Scotland a prey to foreign ambition and rapacity, successive generations of landed proprietors, small and great, had been bound to extend the area of their cultivated land; even those who had no land were, according to Fordun, under an obligation to dig daily seven feet square of earth. Towns had sprung up and had originated both a home and foreign trade. Berwick, then a Scottish possession, had become the greatest port in the Isle of Britain, "The Alexandria of the North." The Church had arisen from its Culdee tomb with more than Columban vigour; by its noble structures, its educational efforts, its elaborate ritual, its parochial organisation, the energy of its prelates and abbots, as well as the unbroken favour of the Scottish kings, it had recovered its spiritual authority, and was once more a power over the consciences of men. A great judiciary system had long been in operation, which required the services of the feudal baronage. In a word the kingdom was completely changed.'

Alexander's two sons and his daughter had all died before him, but the last, who was married to Eric, King of Norway, had left an only child, a little daughter—the Maid of Norway —who was now heir to the throne. Her claim had been admitted at a meeting of the whole baronage at Scone in 1284, after the death of Alexander's second son, and now an embassy was despatched to bring her home from Norway, and preparation was made for the government of the country during her minority. The astute and ambitious Edward I., who then occupied the English throne, and who was anxious to see the two countries united, deemed the chance a favourable one for his purpose, and proposed that a marriage should take place between his son Edward and the young Scottish Queen; and at an assembly of the nobles held at Birgham the proposal was agreed to, full terms being made for the independence of Scotland and its government. Hardly, however, had the so-called Treaty of Birgham been signed, when Edward

* Details of the battles and many of the other leading historical events will be found in the separate articles dealing with the places where they occurred.

by various demands which were inconsistent with its terms, excited suspicions as to his real design, which was to get the whole government at once into his own hands. The young Queen, who was the last descendant of the royal family in a direct line from William the Lyon, died at Orkney on her way to Scotland, and, as her death was unexpected, no provision had been made for the succession to the throne. Ten competitors for the crown, descended on the female side from older branches of the family, at once made their appearance. Of these the chief were John Baliol, who was the grandson of the eldest daughter of King David, and Robert Bruce, the son of David's second daughter, and though the claim of the former was undoubtedly the better as regards descent, each was supported by a body of numerous and powerful adherents. All the claimants were of Norman families, and as such were regarded by the mass of the people as foreigners, and therefore looked on with little favour. By dexterous diplomacy Edward prevailed on them to refer the decision of their claims to himself, insisting, however, that before this was done, all should acknowledge his supremacy; and this, after some delay, they all consented to do, though the community entered a disregarded protest against any such claim being recognised. In 1292 he decided in favour of Baliol, who at once did 'homage as justly due to Edward as lord-superior of Scotland;' but no sooner was the new vassal settled on the throne than the liege-lord he had acknowledged set himself, by a series of studied insults, to stir him up to rebellion, and, as even the worm will turn at last, he was finally successful just as he wished. In 1296 Edward assembled a large army, and marched northward as far as Elgin, whence, finding that resistance had ceased, he returned to Berwick, taking Baliol with him, and leaving all the principal castles strongly garrisoned with English troops and all offices of power in the hands of Englishmen. Hardly, however, had he thus seen his conquest completed, as he fancied, when Sir William Wallace, with the aid of Sir William Douglas, raised a successful rebellion in the south-west and centre of Scotland, and after defeating the English governor, the Earl of Surrey, at Stirling, drove Edward's garrisons out of the country. The English King, who was in Flanders, hastened home, and, marching north at the head of a large army, with which he defeated Wallace at Falkirk, repossessed himself of the whole country between 1298 and 1303. Wallace himself, specially excepted from amnesty, was captured by treachery near Glasgow, and taken to London, where, after a mock trial, in which he was not allowed to defend himself against the false charges brought against him, he was hanged and quartered in 1305.

Even yet Edward's usurped power did not long remain secure, for in 1306 a new outbreak took place, headed by Robert Bruce, son of the Lord of Annandale who disputed with Baliol for the crown. At first the rising was not very successful, for the Scottish army was surprised and defeated at Methven, and Bruce's castle at Kildrummy, whither he had sent his wife for safety, was captured. He himself had to take refuge in Rathlin Island, off the Irish coast, and afterwards in Arran, whence he was able to reach the Ayrshire coast, where some of his estates were, and surprise and capture his own castle of Turnberry. Aided by Sir James Douglas, he again took the field, and the death of Edward I. at Burgh-on-Sands, while on his way north in command of his army, and the inaction of his son, Edward II., gave the Scots a chance of which their leader was not slow to avail himself; and, after defeating Comyn and an English force in Buchan, he gradually recovered the whole land, till in 1313 the only castle still garrisoned by the English was that of Stirling, which surrendered in the following year, after the battle of Bannockburn. The independence of Scotland was formally recognised by England in the treaty of Northampton in 1328, but King Robert did not live to apply his strong will to the settlement of the kingdom, as he died at Cardross in 1329, and under his son David II. (1329-71), who was only five years old when he succeeded, the country fell into a state of complete anarchy, a number of disaffected nobles having joined a rebellion headed by Edward Baliol, the son of John, whose pretensions were also supported by England. The chief Scottish defeats were at Halidon Hill and Neville's Cross, at the latter of which battles David himself was taken prisoner, and was not released till nine years afterwards, in 1357, when he obtained his liberty on payment of a large ransom. He was succeeded by Robert II. (1371-90), son of Bruce's daughter Marjory (see PAISLEY), and the first of the Stewart line of kings. The early part of his reign was pretty free from trouble with the English, but many raids took place on both sides, the chief being the one in 1388, which terminated in the famous battle of Otterburn or Chevy Chase, after which there was peace between the rival nations for eleven years. Robert II. was succeeded by his son Robert III. (1390-1406), who, with good intentions but a weak will, allowed the power to fall into the hands of his brother the Duke of Albany. Raids on both sides again commenced on the expiry of the eleven years' truce in 1399, but the only noteworthy feature of them was the disastrous defeat sustained by the Scots at Homildon Hill near Wooler, in Northumberland. The Duke of Albany was suspected of cherishing designs on the throne, and the suspicion being confirmed by the mysterious death of the king's eldest son, the Duke of Rothesay, in 1402 at Falkland Palace, where he had been confined by

Albany's orders, Robert was in 1405 induced to send his only other son James, then a boy of fourteen, to France to be educated. Though England and Scotland were at peace at the time, the ship in which he set sail was captured by an English ship, and James was detained as a prisoner by the English king. This crowning misfortune seems to have broken Robert's heart, and he died in the following year. Though James I. (1406-37) thus nominally succeeded in 1406, he was not released till 1424, the government of Scotland being carried on first by Albany down to 1419, and then by his son Murdoch. The noteworthy event of the period was the battle of Harlaw. Though James had been detained as a captive, he had been trained and educated as carefully as if he had been heir to the English throne instead of king of Scotland, and no sooner had he taken the government into his own hands, than he set himself vigorously to the task of introducing law and order throughout the kingdom.

It is curious, as showing how far England in the early centuries had outstripped Scotland in civilisation, that both the early reforming and law-giving kings of the latter country were educated at the English court. James's reforms, however, caused disaffection in some quarters, and he was basely murdered at Perth in the beginning of 1437. From this time, till that of James VI., Scottish History is almost a mere list of trouble and misgovernment arising from quarrels and struggles for power among a set of turbulent nobles who had often no strong hand to keep them in order, inasmuch as the next six sovereigns all succeeded to the throne while they were minors. During the reign of James II., the Douglases, who had so increased in power, and unfortunately also in misplaced pride, as to regard themselves as equal in authority to the king, had their influence broken by the murder of the sixth Earl at Edinburgh Castle in 1440; by the assassination of the eighth Earl by James himself at Stirling Castle in 1452; and by the defeat of the ninth Earl and his brothers, the Earl of Moray and the Earl of Ormond, at Arkinholm, where the town of Langholm now stands, in 1454. James II. was killed at Roxburgh in 1460. His son James III. (1460-88) seems to have been a man of culture, but weak of will, and fond of entrusting the government to favourites. The first of these were the Boyds of Kilmarnock, who fell into disgrace in 1468, and were succeeded by a body of men who seem to have been connected with the fine arts, and whom some of the nobles hanged at Lauder Bridge in 1482. In 1488 it was suspected that James had entered into communication with Henry VII. of England, with views favourable to a revival of the old claim of overlordship, and a confederation having been formed against him, the royal forces were defeated at Sauchie, and the king murdered as he fled from the field of battle. James was married in 1469 to the daughter of Christian I., King of Denmark, and received the Orkney and Shetland Islands in pledge for part of her dowry (see ORKNEY), so that it was in his reign that the kingdom finally reached its present extent. In the reign of his son and successor, James IV. (1488-1513), the most noteworthy events were the thorough subjection of the Lord of the Isles; the king's marriage with Margaret, daughter of Henry VII., which a century afterwards opened the way for the accession of the Stewart line to the throne of England; and the war at the end of his reign terminating at the fatal battle of Flodden, where, through bad generalship, James himself and 10,000 of his army, including a large number of men of note, were slain. James V. (1513-42), who succeeded, was, in the early part of his reign, entirely in the hands of the Earl of Angus, who conducted affairs pretty much as he pleased till 1528, when the king, then 17 years of age, escaped from Falkland to Stirling, and Angus's power was broken. He promised to make a vigorous ruler, and established order along the Borders and in the Western Islands in 1530-32, but his unfortunate partiality for a favourite named Sinclair led to a disaster to his army at Solway Moss in 1542, and James, already ill with vexation at the refusal of his nobles to march with him into England, removed to Falkland, where he died in the end of the same year. It was during his reign that the Reformed doctrines first began to make headway in Scotland, but the tracing of their spread and results fall to be dealt with in the section on Ecclesiastical History.

James was succeeded by his daughter, the beautiful but unfortunate Mary Queen of Scots (1542-67), who was at the time of her accession an infant of only a week old. Henry VIII., who was then King of England, wished a marriage to take place between the infant queen and his son Edward, and the Scottish Estates agreed to this proposal; but quarrels having arisen between the two countries as to alleged piracy by English vessels, and Border raids, the treaty was not confirmed. Henry tried to enforce compliance to his wishes by invasion, and in 1544 the Earl of Hertford wasted the whole of the south-east of the country, burned Edinburgh and Leith, and spread ruin far and wide. He invaded the same district again in 1547, when he defeated the Scottish army at Pinkie; and in the following year the young queen, who had been sent for safety to Inchmahome in Lake Menteith, was sent away to France, where in 1558 she was married to the Dauphin, who succeeded to the throne in 1559. As Francis seemed inclined to treat Scotland as a French province, fresh difficulties would clearly have arisen, but he died in 1560, and Mary returned to Scotland. On her arrival, she found the nobles divided into

two parties, one of them, headed by the Earl of Huntly, adhering to the Roman Catholic Church; the other by her half-brother, James, Earl of Murray, adhering to the Reformed doctrines. At first she sided with the latter; but after her marriage with Darnley the alliance was broken. Her married life was unhappy, and having conceived a passion for the Earl of Bothwell, she seems to have become privy to a plot for her husband's assassination, which was perpetrated near Edinburgh in 1567, and was married to Bothwell in little more than three months after. These proceedings having alienated the greater number of her subjects, a confederation was formed against her; and after a vain effort to get an army to fight on her behalf at Carberry Hill, she surrendered, and was confined in Lochleven Castle, where shortly after she was compelled to abdicate the throne in favour of her infant son, James VI. (1567-1625), and to appoint the Earl of Murray regent. Early next year she escaped, and passing by Niddry Castle to Hamilton, placed herself at the head of an army, and advanced towards Dumbarton. Her forces were met and defeated by Murray's army at Langside (see GLASGOW), and she herself fled to England. Murray ruled well and wisely; but after his assassination at Linlithgow in 1570, there were, down to 1581, a succession of regents who were quite incapable of governing their turbulent brother nobles, and who allowed affairs to fall into great disorder. From 1581 to 1603 James may be considered as ruling himself, though in the early part of that time the power was really exercised by the Earls of Lennox and Arran. From their hands he was rescued by the lords engaged in the Raid of Ruthven. The only other event of the reign, prior to 1603, was the Gowrie Conspiracy.

On the death of Elizabeth in the year just mentioned, James, as the nearest heir through his descent from Margaret, daughter of Henry VII., and wife of James IV., succeeded to the English throne, and from this date Scotland ceases, except in one or two instances, to have a history separate from that of the United Kingdom. The struggle between Presbyterianism and Episcopacy, important as were its effects on civil as well as on religious liberty, falls properly to be dealt with in the section on Ecclesiastical History; but it may be noted that while the 'blue bonnets' whom Leslie, in consequence of this quarrel, led over the Border, and who had such an important effect on the issue of the great English civil war, were busy in the south, Montrose, by his rapid march from Athole on Perth and Aberdeen and all over the north, with his victories at Inverlochy, Auldearn, and Alford, and afterwards at Kilsyth, almost recovered Scotland for Charles ere his army was dispersed at Philiphaugh. The support afforded by the Scots to Charles II. in 1649-50 failed in its object, and the whole country fell under the power of Cromwell; and though the Restoration was nowhere hailed with greater joy than in Scotland, the misgovernment and religious persecution, with which Charles and James VII. repaid past exertions on their behalf, made the greater part of the people eager to welcome the deliverance brought by William of Orange. The exiled house still, however, retained a firm hold over the hearts of many Scotsmen, especially in the Highlands, and the amount of discontent that prevailed so alarmed Queen Anne's advisers in view of objections to the succession to the throne and the chances of a civil war, that they prevailed on the Scottish Estates to pass a bill providing for the Union of the two kingdoms, which accordingly took place in 1707. The result of the Act, as well as the means used to carry it through, were unsatisfactory, and caused discontent which, partly at all events, led, on the Queen's death and the accession of George I. in 1714, to an armed rising of Jacobites under the Earl of Mar. A considerable army gathered at Perth, but their advance was checked at Sheriffmuir, and the hopeless incompetence of the Chevalier, who took command in person, soon after completed the ruin of the rebellion, and Mar and James slipped secretly on board a French vessel at Montrose, and left their poor followers to their fate. In 1745 the Chevalier's son, Prince Charles Edward, with only seven adherents, crossed from France to make another but more determined effort of the same sort. Landing on the west coast of Inverness-shire, and setting up his standard at Glenfinnan, where he was joined by many of the Highland clans, he marched south by Perth to Edinburgh, defeated Cope at Prestonpans, and penetrated into England as far as Derby. On the retreat he defeated General Hawley at Falkirk, but was totally routed by the Duke of Cumberland at Culloden, and with this last Jacobite rising the separate history of Scotland comes entirely to an end, and the Scottish independence and steadfast effort so strongly exemplified by all the national history becomes thereafter an important factor in the development of Great Britain.

XVII. ECCLESIASTICAL HISTORY.

By the Rev. JOHN REITH, M.A.

CHRISTIANITY existed in Scotland during the time of the Roman occupation. In 397, towards the close of that period, St Ninian is said to have introduced it among the southern Picts at Whithorn, and thence to have spread it as far north as the Grampians. From 410, when the Romans left Britain, till about the middle of the sixth century, is a legendary period of Scottish Church history. This Fordun filled up with narratives borrowed from previous chroniclers, which were enlarged by Hector Boece, but which are not accepted by modern critics as historically accurate. Thus there seems to be no historical ground for supposing that St Palladius was ever in Scotland at all. St Servanus, who is said to have been found by Palladius on his arrival in Scotland (430), belongs to the latter half of the seventh century, and the Culdees are really never heard of till the beginning of the eighth century.

Towards the end of the fifth century, a colony of Scots from the north-east of Ulster settled in the west of Scotland in a district which at least after that was called Dalriada. Although for a time they prospered and spread, they kept their footing with difficulty till the arrival (563) of Columba, who, by his influence with Brude, King of the Picts, secured them from molestation. (See IONA and INVERNESS.) They then extended their operations eastward, and the whole of Scotland north of the Forth was christianised. South of the Forth the great missionary was St Cuthbert, whose abbey at Lindisfarne was to the north of England and Lothian what Columba's monastery in Iona was to the north of Scotland—the centre of ecclesiastical government and religious enterprise. At this period there was no organisation that could properly be called a church. The country was christianised by a system of monastic settlements, and although the missionaries were ordained, they were under the jurisdiction of the abbots of the monasteries, who were often laymen. See our articles WHITHORN, FORDOUN, IONA, INVERNESS, and MELROSE.

During the next period of Scottish Church history—the seventh and eighth centuries—the important question is the controversy between the native Church and the Roman Church regarding the observance of Easter, the shape of the tonsure, etc. When the purely Christian festival of Easter was substituted in the early Church for the Jewish Passover, great difficulty was experienced in adjusting the day of the week, or solar time, to the day of the month, or lunar time. The system adopted in the Western Church was to celebrate Easter on the Sunday between the 14th and the 20th day of the moon first after the vernal equinox, calculated on a cycle of eighty-four years. But a change was made in 457, and in 525 the cycle of nineteen years was finally adopted—Easter to fall on the Sunday between the 15th and 21st day of the moon. Now this change took place at the time when Ireland was completely isolated, so that the Christians there held by the former system, and regarded the latter as an unwarrantable innovation. In 710 Nectan, King of the southern Picts, issued a decree that the Catholic mode should be observed throughout his dominions; and as the Columban monks refused to comply with this decree, the whole of them were expelled from his kingdom (717).

At the time when the Church in Scotland was coming into collision with the Church of Rome in this manner, two influences were at work modifying its constitution internally. One of these was the introduction from the Church of Rome of a hierarchy of secular clergy, with bishops exercising jurisdiction over the monasteries. The other was the rise of the so-called Culdees or Anchorites (the name representing the Lat. *Deicolæ*, which was applied to Anchorites, as specially God-worshippers), who are first heard of in Scotland after the expulsion of the Columban monks. When in the ninth century they were brought under canonical rule, along with the secular clergy, the name of Culdees came to be almost synonymous with secular canons. An attempt was made by Kenneth mac Alpin to restore the Columban Church in his dominions; and for this purpose he founded an abbey at Dunkeld, and made its abbot the first Bishop of Fortrenn (*i.e.*, the kingdom of the Southern Picts), whose seat was transferred to ABERNETHY in 865. The seat of the bishop of the Scottish Church (a title which first occurs in the time of Girig, 878-89), or Bishop of Alban, was transferred to ST ANDREWS about 908. After the battle of Carham (1018), when Lothian was ceded to Malcolm II., the churches in that district fell under the jurisdiction of the Bishop of St Andrews as sole Bishop of Scotland.

An important influence was exercised on the Scottish Church by Margaret, the English princess, who wedded Malcolm Ceannmor in 1068. Her policy, which was continued by Malcolm's successors, was (1.) to substitute a diocesan episcopacy for the old monastic jurisdiction; (2.) to introduce religious orders; and (3.) to absorb the Culdees into the Roman

system by converting them from secular into regular canons. King Alexander (1107-24) created two new bishoprics—Moray and Dunkeld; and his brother David, while yet Earl of Cumbria, reconstituted the bishopric of Glasgow (about 1115). When he became king (David I.), he created three new bishoprics—Aberdeen, Ross, and Caithness; and towards the close of his reign other two—Dunblane and Brechin. Alexander and David also founded a large number of monasteries for the regular canons of St Augustine and for Benedictine monks. And even more direct measures were taken for the extermination of the Culdees. Their revenues and rights were bestowed on the regular canons; and such was the pressure brought to bear upon them, that this last remnant of the old Celtic Church was absorbed into the order of regular canons in the course of the thirteenth century. See DUNFERMLINE, COLDINGHAM, MELROSE, JEDBURGH, KELSO, DRYBURGH, NEWBATTLE, etc.

The Church of Scotland was now completely assimilated to the Catholic Church in the rest of Europe. And previous to the Reformation the corruptions of the Church had grown to a greater height in Scotland than in any other nation within the pale of the Western Church. In the second quarter of the sixteenth century, several persons were put to death for heresy, that is, preaching against the errors of the Church—Patrick Hamilton (1528), George Wishart (1546), Adam Wallace (1550), and Walter Mill (1558). But the death of these men, with the exception of the last, did not produce any wide-spread excitement. The truth is, that the causes of the Reformation were of a more practical nature than anything connected with a corruption of doctrine or abuses in matters purely religious. First, there was the collision between the higher ecclesiastics and the nobility. For a time the latter had seen their property and power taken from them to enrich the clergy; and when a set of teachers arose who taught that the clergy had no right to the position and wealth they had assumed, the nobles were very willing to be convinced. By the poorer classes, the tithes and other dues exacted by the Church were felt to be a burden. In 1557 the first Covenant was signed—a document by which the leaders of the Protestant party—the Lords of the Congregation, as they were now called—bound themselves to co-operate with each other in maintaining and establishing the Word of God, and in enmity to the antichrists of the time. The *casus belli* was the burning of Walter Mill. The Lords of the Congregation laid a remonstrance before the Regent, who received it in such a conciliatory manner as to allay the excitement for a time. An ecclesiastical council, too, met in 1559, to consider certain suggestions for reform made by a body of gentlemen well affected to the Established Church. But such attempts at internal reform came too slowly or too late. The Queen Regent at this time assumed an attitude of distinct hostility to the Reformers, and her persecutions helped to produce an outbreak of popular zeal in their favour at Perth. The symbols of idolatry were attacked by the mobs, and many of the religious houses destroyed. The Reformers now issued manifestoes expressing defiance of the Queen Regent, who attempted to crush the opposition to her authority by means of French troops. Distrusting her strength, however, she made promises, on the faith of which the Congregation dispersed from Perth, where they had organised a defence. These promises were almost immediately broken, and the consequence was a fresh accession of strength to the Reformers, who now took possession of St Andrews. They were not only able to hold their own there against the royal army, but they marched on Edinburgh, and took it (June 29). They were unable to retain this position, but a treaty with England was made (January 1560); English assistance was sent to Scotland; and the French army withdrawn. The Estates being convened in August, a Confession of Faith embodying the principles of the Genevan Church was approved of; all previous Acts on religious matters repealed; the authority of the Pope abjured; the celebration of the Mass declared illegal; and Calvinistic Protestantism established as the national religion. The first General Assembly of the Protestant Church of Scotland was held on the 20th December 1560.

But the victory of the Reformers was yet far from being complete. Under the influence of Mary, a Catholic reaction set in, and a dispute arose among the Protestants themselves. The clergy had adopted, besides the Confession of Faith, a Book of Discipline, which the laymen were unwilling to subscribe, because it proposed that, while the tithes went to the support of the ministers and the poor, the revenues of bishops, abbeys, and cathedrals should go to the endowment of colleges and schools. This was not what Knox's coadjutors had worked for. The deposition of Mary was favourable to the Reformation. The Regent took a solemn oath to maintain the Reformed Faith and to abolish Popery. The General Assembly prepared a scheme providing effectually for the security of the Protestant cause, which was confirmed by Parliament in 1567; and from this time Protestantism was firmly established, and the Reformation complete.

But after the death of Knox (1572) a new conflict began—between Presbyterianism and Episcopacy. The Regent Morton favoured the latter, because he hoped, by means of the bishops, to exercise a power over the Church which would contribute to the stability of the

government; and the nobility favoured it, because they hoped, by means of the bishops, to keep part of the plunder of the Church. Accordingly, by the Convention of Leith (1572) it was enacted that the titles of archbishop and bishop should be retained till the king's majority. But as the bishops were to be chosen by the ministers, and subject to the General Assembly in matters spiritual, the anomaly was presented for a time of Episcopacy and Presbyterianism co-existing in the Church of Scotland. The first objections to the lawfulness of the Episcopal form of government were made at the Assembly which met at Edinburgh in 1575. The ring-leader in the opposition was Andrew Melville, whose naturally vigorous mind had been imbued with the opinions of Beza and other Reformers with whom he had come in contact on the Continent. Led by him, the ruling party in the Assembly passed successive enactments curtailing the powers of the bishops; and the Second Book of Discipline, which embodied his opinions, was finally adopted by the Assembly in 1581, an act abolishing Episcopacy having been passed in 1580. The National Covenant of Scotland, also enacted at this time (1580), was intended as a test of orthodoxy in regard to prelacy. The outrage on the king, called the Raid of Ruthven (1582), produced a great reaction, so much so that in 1584 three Acts of Parliament were passed in favour of Episcopacy. Yet in 1592 the Presbyterian party had so far regained their influence, that they carried a measure through Parliament which formally established Presbyterian Church government, and which has been called the Great Charter of the Church of Scotland. It repealed the Act of 1584, giving the king power to commission bishops to regulate all ecclesiastical matters in their dioceses; it gave to the General Assembly the right of meeting once every year; and it defined the rights of patrons and church courts in regard to vacant charges.

On James's accession to the throne of England (1603), he virtually suppressed the General Assembly by proroguing it repeatedly as soon as it had met. He had always preferred Episcopacy as most suitable to a monarchical form of government in the State, and maintained that without it there was no regular and duly authorised polity in the Church; and at length he succeeded in getting the Parliament which met at Perth in 1606 to reinstate the bishops in their former dignities, erecting seventeen sees. The General Assembly which met at Perth in 1618 adopted five articles, which were very objectionable to the Presbyterians: that the communion should be received by the people on their knees; that it might be administered in private to the sick; that baptism might be given in private; that the young should be confirmed; and that the festivals of Christmas, Easter, Ascension, and Pentecost should be observed. Charles I. on his accession (1625) resolved to carry out his father's two great designs regarding the Church of Scotland, viz., the restoration of Episcopacy, and the recovery of the Church lands and tithes. A liturgy and book of canons were now prepared by the Scottish bishops. To the former all public worship was ordered by royal proclamation to be conformed. By the latter Presbyterianism was completely subverted, and Episcopacy put in its place. When the attempt was made (July 23, 1637) to introduce the new services into public worship, there was a riot in Edinburgh, and all Scotland was roused almost to insurrection. A Covenant was prepared, based on that of 1580, which was signed by a great majority of the people. The king wished to carry matters with a high hand, but his Commissioner, finding the Covenanters too strong, offered to make great concessions. These concessions, however, were not thought sufficient by the General Assembly convened at Glasgow (November 1638); and when the Commissioner dissolved the Assembly, the members proceeded to assert their independence of the crown, repealed all the Acts of Assembly since 1606, and deposed all the bishops.

When the Scottish army met that of Charles at Kelso, a treaty was signed (June 18, 1639), ratifying the promises made to the Assembly of 1638. In August the General Assembly again met and renewed the National Covenant, which was signed by the Royal Commissioner. The result of the Civil War, begun in 1640, was that, instead of Episcopacy being imposed on the Church of Scotland, Presbyterianism was like to have been imposed on the Church of England. The Solemn League and Covenant was signed in 1643 by a large majority of the people of Scotland; and the Confession of Faith, prepared by the Assembly of Divines at Westminster, was ratified by the General Assembly (Edinburgh, August 4, 1647), and became henceforth the authorised standard of the Church. In July 1653, the General Assembly was dissolved by Cromwell; but otherwise the Church of Scotland had peace during the time of the Commonwealth. On the restoration of Charles II., Presbyterianism was overthrown.

In the month of August 1660, the king sent a letter to the presbytery of Edinburgh intimating his intention 'to protect and preserve the government of the Church of Scotland as it is settled by law, without violation, and to countenance in the due exercise of their functions all such ministers who shall behave themselves dutifully and peaceably.' But when the Scottish Parliament met in January 1661, the Act Rescissory was passed, destroying at a blow all the legislation of the last twenty-seven years in favour of Presbyterianism, and restoring all the old laws in favour of Episcopacy. A Remonstrance was drawn up by the presbytery of

Edinburgh and the synods of Glasgow and Galloway. A letter was received by the Privy Council from the king, rescinding his letter of the year before, and declaring his intention to interpose his royal authority for restoring the Church to its right government by bishops, 'as it was by law before the late troubles.'

The Episcopal succession having died out, however, recourse was had to the English Church, and four Scottish divines having been consecrated in England, the rest of the Scottish bishops were consecrated by them. A further Act of Parliament for the restitution and re-establishment of the ancient government of the Church by archbishops and bishops was passed in 1662, by which all the laws in favour of Presbyterianism, especially the Charter Act of 1592, were rescinded, whilst the bishops were reinstated in the position they held previous to 1638, and authorised to take upon themselves the whole government of the Church. Patronage had been abolished by an Act of Parliament passed in 1649, and the Assembly had vested the right of electing ministers in kirk-sessions, with power to the congregation to appeal to the presbytery if they were dissatisfied. All ministers ordained from 1649 to 1660 had been chosen under this system, but it was now declared that they had no right to their livings, unless they should receive a presentation from the patron and institution from the bishop. A Privy Council, held at Glasgow on the 1st of October, passed an act declaring that all ministers who did not submit to the bishops before the 1st of November, would forfeit their livings and be interdicted from preaching. Rather than submit, nearly 300 ministers, principally in the south-western counties, abandoned their livings and homes. Some of them, however, continued to preach in their parishes, and the parishioners flocked to hear them, while the churches, in which Episcopalian clergymen now officiated, were deserted. This was the beginning of the Covenanting conventicles, whose worshippers were hunted by soldiery, and when caught were tortured and executed. On the 13th of November 1666, a few Covenanters overpowered some soldiers at Dalry in Galloway, marched to Dumfries, where they surprised Sir James Turner, and then went in the direction of Edinburgh. Now increased to 900, they were attacked (November 28) by Sir Thomas Dalyell at Rullion Green, and defeated, with a loss of 45 slain and 100 captured. The latter were hanged in lots. To deal more summarily with the Covenanters, the Assertory Act was passed (November 1669), declaring the king inherently supreme over all persons and in all causes. But the only effect of these severities was to render the Covenanters more determined, and to make conventicles larger and more frequent. A fresh act was passed against conventicles in July 1670, by which it was made obligatory upon all to reveal upon oath what they knew about persons attending them; and another act was passed to punish every one preaching at them with confiscation and death. Other acts imposed fines, imprisonment, and exile for having a child baptized by an ousted minister, or for being absent, without sufficient cause, for three successive Sundays from the parish church. In 1675, Letters of Intercommuning (*i.e.*, of civil excommunication) were issued against about a hundred of those who had either preached or been present at conventicles, declaring all guilty of the same crime who should now harbour them or converse with them, supply them with food or clothes, or extend to them any of the merest charities of life.

Notwithstanding these severe laws, conventicles still continued; and it was resolved to treat the country as in a state of rebellion. 'A host of ten thousand men, of whom six thousand were Highlanders, was marched into the West Country, to seek free quarters there, and promote Episcopacy in their own fashion.' 'It was a rabble of caterans accustomed to plunder and theft—taught to regard plundering the Sassenach as a virtue, and having many of the habits of savage life.' So harassing and shameless was the oppression, that even the King felt it could not be continued, and the Highland host was dismissed to their homes laden with the spoil of the campaign. On the 3d of May 1679, Archbishop Sharp was murdered on Magus Muir. This desperate act was the signal for an outbreak in the West, which was ripe for rebellion. Thither the murderers had fled, and at Rutherglen the ringleaders affixed to the market-cross a paper in which they denounced the various Acts of Parliament by which Presbyterianism had been overthrown, Episcopacy established, and Presbyterians ill-treated; and then they burned copies of the acts in question. From Rutherglen they went to Hamilton, thence to Drumclog, and thence to Glasgow, but, after a useless skirmish with the military there, they returned to Hamilton, now increased to 4000 or 5000. At Bothwell Bridge they were utterly routed, but, instead of being quelled, they were only rendered more bitter in their opposition to Charles and his government. The most extreme section now received the names of Cameronians, Society-men, Hillmen, Wild Whigs. On the 3d of June 1680, at South Queensferry, a paper was seized on the person of Hall of Haughhead, declaring the perjuries and oppressions of Charles to be so shameful that he could no longer be counted a sovereign worthy of obedience, and that the throne ought to be held as vacant. On the 22d June twenty-one men made a similar declaration at the market-cross of Sanquhar; but next day a party of sixty-three was surprised and routed at Airdsmoss.

Nothing daunted, however, the Society-men still continued to meet; and at Torwood in Stirlingshire, Donald Cargill (for whose capture, dead or alive, a large reward was offered) excommunicated the chief persecutors of Scotland—namely, the King, the Dukes of York and Lauderdale, General Dalyell, and Sir George Mackenzie. In 1681 the Test Act was passed, requiring every person in public office to swear that he acknowledged the king to be supreme in all causes and over all persons, both civil and ecclesiastical; that he would never consult about any matters of state without his majesty's express licence or command; and never attempt any alteration in the government of the country. A Royal Succession Act was passed at the same time, to enable the Duke of York, who was a Catholic, to succeed to the throne. Nearly eighty ministers resigned their livings rather than sign the former, and both acts were publicly burnt in Lanark by a party of Cameronians. Multitudes were ruinously fined, sent to the West Indies as slaves, or hanged; and the discovery of the Rye-house Plot in 1682 only brought new severities on Scottish Presbyterians. In May 1684 a new proscription-roll of nearly 2000 names was published, in reply to which the Cameronians published an Apologetic Declaration, to the effect that they had resolved to take the law into their own hands, and avenge their sufferings on their persecutors.

On the accession of James II. (1685), an Act of Indemnity was passed, but the Presbyterians would not take the oath of allegiance, and the persecution continued. (See WIGTOWN, MUIRKIRK, and DUNNOTTAR CASTLE.) In April 1686, James proposed to the Scottish Parliament a plan for giving liberties to the Presbyterians, who would have none of it, because the same liberties were extended to the Roman Catholics. The next year the King passed the act without consent of Parliament. The moderate Presbyterians took advantage of the toleration thus obtained, and even wrote a letter thanking the King; but the Cameronians continued defiant. The last of their number to suffer before the Revolution turned the tables in their favour was James Renwick (Feb. 1688).

At the Revolution in 1688, the bishops, as a body, having declined to transfer their allegiance to the government of the Prince of Orange, while the Presbyterians gave it their warm support, Presbyterianism was re-established in room of Episcopacy. William would have pursued a more liberal and comprehensive policy, but he was obliged to yield; and when Parliament met in April 1690, its first act was to abolish the Act of Supremacy (1669); its second, to restore all the ousted Presbyterian ministers. The next act ratified the Westminster Confession of Faith, revived the Act of 1592, repealed all the laws in favour of Episcopacy, declared the government of the Church to be vested in the restored ministers, and appointed the General Assembly to meet. Patronage also had to be given up. 'It was enacted that in all vacancies the heritors and elders should nominate a person for the approval of the congregation; and that if the congregation disapproved of the nominee, they were to give in their reasons of disapproval to the Presbytery, by whom the matter was to be finally determined. In consideration of their being deprived of their right of presentation, patrons were to receive from the parish the sum of six hundred merks, and a right to all the teinds to which no other could show a title.' On the 16th of November the General Assembly met, the first time for thirty-seven years. Before it rose two commissioners were appointed 'to purge out of the ministry all who should be found to be insufficient, supinely negligent, scandalous, or erroneous;' and, on charges variously classed under the above heads, a large number of Episcopal clergy were deposed from their office, leading to the suspicion that Episcopacy constituted their principal crime. In short, the Presbyterians proved the Episcopalians to have been wrong in 1662 by paying them back in their own coin in 1690. The Episcopalians were still in a majority of ministers, notwithstanding all the evictions, and the Presbyterians feared that, if they were admitted to a vote in the Church courts, they might turn matters to suit themselves. But what the General Assembly would not do was done by Parliament. 'An Act for Settling the Quiet and Peace of the Church' was passed in 1693, by which all Episcopal ministers who took the oaths of Allegiance and Assurance, subscribed the Confession of Faith, and acknowledged the Presbyterian Government as the only government of the Church in Scotland, were to be admitted to a share in the government of the Church, and all who thus qualified themselves were to be protected in their churches and livings. At the Union, in 1707, there were 165 Episcopal ministers within the Establishment. The Toleration Act passed in 1712 was intended to discourage all persecution of the Nonjurors, although ostensibly limited to those who took the oaths to government, making it lawful for them to meet and worship in their own manner (that is, giving 'protection both to clergy and laity in the free use of the Book of Common Prayer'), and exempting them from the jurisdiction of the Presbyterian Church courts. So influential were the Episcopalians in the time of Queen Anne and so favourable their condition, that they had sanguine hopes of a second Restoration, and of their Church again becoming the national Establishment. But these hopes were dashed by the death of Queen Anne (1714), and still more by the Jacobite rising of 1715. Not only

was there no more toleration for Nonjurors, but the distinction between them and Jurors was lost. Episcopalians generally were dreaded by the civil authorities as Jacobites, not without good reason; but they were also disliked by the Established Church for using liturgical services. On the one charge or the other, Episcopal ministers who had retained parish churches were deprived, chapels were shut up, the congregations dispersed, and the prosperity which the Church enjoyed came to an end.

The Moderate party gained complete ascendancy during the leadership of Dr Robertson, the historian. After his retirement from the Assembly in 1780, the Anti-Patronage party made an unsuccessful attempt to push their views, and the question remained comparatively quiescent till 1825, when an Anti-Patronage Society was formed. About this time the Voluntary Controversy began to agitate the public mind, and the Voluntaries brought the charge against the Church that she had bartered her freedom for State protection and support. These taunts were partly the cause of the high views about spiritual independence which now arose, and finally led to the Disruption. In the Assembly of 1832, overtures were presented recommending that steps should be taken to restore the call to its old place in the settlement of ministers; and although these were rejected, they were only returned next year multiplied fourfold. Once more there was a majority against them, but this was the last victory of the Moderate party. Next year (1834) the Veto Act was passed: 'That if, at moderating in a call to a vacant pastoral charge, the major part of the male heads of families . . . shall disapprove of the person in whose favour the call is proposed, the power of presenting shall pass to the presbytery at the end of six months.' This was intended to checkmate the action of certain patrons who kept benefices in their own hands for a length of time by making a series of presentations to men who, they knew, would not accept them, gaining six months each time. In regard to this matter, the Church was divided into two parties, known respectively as the Moderate and the Popular. The former went by the Act of 1690, according to which the call to a minister was given by the heritors and elders; the latter went back to the Act of 1649, according to which the call had to come from the congregation. In 1732 the Moderates had succeeded in carrying an Act of Assembly 'anent the planting of churches;' and at the ensuing meeting of the synod of Perth and Stirling, Ebenezer Erskine, minister of Stirling and moderator of the synod, had preached a violent sermon against that act. Having been first rebuked by the synod, Erskine was next rebuked by the Assembly (1733). The protest which he read against this action was regarded as a sign of contumacy, and the Commission was instructed to deal with him unless he withdrew it. This he refused to do, and he was accordingly loosed from his charge at the November meeting; whereupon he and other three, who had adhered to the protest, formed themselves into the Associate Presbytery. See United Presbyterian Church *infra*.

This had been only the beginning of a hundred years' contest regarding patronage and kindred matters. It culminated in 1843 in the Disruption of the Church. (See Free Church *infra*.) The same year an Act of Parliament was passed (known as Lord Aberdeen's Act), according to which the presbytery, when considering objections to a presentee, were to have regard 'to the character and number of the objectors.' The patronage grievance was finally removed in 1874. The General Assembly of 1869 resolved to petition Parliament for its removal, and the Government passed an act in 1874 repealing the Act of Queen Anne, abolishing patronage, and vesting the election of ministers entirely in the free choice of congregations. This danger passed, the rock at present ahead is Disestablishment. Since the passing of the Act of 1874, a new objection has been urged against the Church, namely, that she is now a mere sect, and that her Establishment and Endowment are a violation of religious equality, in respect that a privilege is thus given to one church to the exclusion of others, and that it is given to one at the expense of many who do not use it. At one time it was even asserted that the Established Church was in a minority, but this statement was contradicted by Principal Tulloch in a letter to the *Times* (July 6, 1878), and has since been practically abandoned. Other objections are that it violates the rights of conscience, and that it is unscriptural and injurious to religion; and it is further urged that Disestablishment would be beneficial to the Church herself, since nothing else will ever make her *free*, and that it would be the first step towards Presbyterian union.

At the time of the Disruption there were 924 old parishes and 42 parliamentary churches, that is, churches which had been built and sparingly endowed by Parliament in destitute districts of the Highlands. The first form of the movement for church extension was an attempt to prevail on the State to build additional churches. When this failed, the Church resolved to build them by voluntary effort, hoping to obtain endowments from the State—an effort in which Dr Chalmers took a leading part, and by which 200 chapels were added to the Church before the Disruption, 50 of which were retained by the Free Church. When all hope was abandoned of obtaining even endowments from the State, while an Act of Parliament (Sir

James Grahame's Act) had been passed (1844) legalising the erection of *quoad sacra* parishes, the Church resolved to provide them also by voluntary contribution. The first Endowment Committee was appointed in 1846, with Dr Robertson as convener; and before his death, in 1860, nearly £400,000 had been raised, and more than 60 new parishes added to the Church; while up to the present time 329 new parishes have been endowed, besides 40 parliamentary churches erected into parishes, at an outlay, over and above the cost of the buildings, of more than £1,000,000. There are now altogether 1293 parishes, the ministers of which are entitled to sit in the Church courts; and 295 unendowed churches and preaching and mission stations. Communicants, according to Parliamentary Return of 1878, 515,786.

The doctrine of the Church of Scotland, as settled at the Reformation, was Calvinism, and this was fully defined in the Confession of Faith which was adopted in 1643 as the Standard of the Church. After the Revolution two parties arose, subsequently known as Moderates and Evangelicals. The latter were distinguished by their attachment to popular interests and liberties, and by their opposition to all the opinions identified with Arminianism; the former by their steady and uniform support of lay patronage, and their opposition to the doctrinal views of the Evangelicals, on the ground that these tended to Antinomianism. There is a third and growing Broad Church party, holding opinions which show a considerable departure from the teaching of the Confession of Faith. It is not merely that individuals have expressed themselves in favour of greater latitude of opinion and greater freedom in subscription to creeds, but the moral inability of the Church to shut the mouths of such men is a practical admission that the Church cannot now be bound by the theology of the sixteenth century. It may safely be affirmed that the prosecution of a good man for *mere* heresy is now regarded by the public conscience as an act of barbarous fanaticism, to be reprobated and denounced by all right-thinking men. Even in the severer sects that have cut themselves off from the Church of Scotland, this holds true; but in a church claiming not only on *historic* but also on *actual* grounds to be distinctively 'National,' the assertion of the 'principle of comprehension' (within the limits prescribed by the acceptance of Christianity as a 'Divine Revelation') appears to be a sovereign duty no less than a logical necessity.

See W. Reeves, *Adamnan's Life of St Columba* (1874), and *Culdees of the British Islands* (1864); A. P. Forbes, *Lives of SS. Ninian and Kentigern* (1874), and *Kalendars of Scottish Saints* (1872); W. F. Skene, *Celtic Scotland*, vol. ii. (1877); F. E. Warren, *Liturgy and Ritual of the Celtic Church* (1881); J. Anderson, *Scotland in Early Christian Times* (2 vols., 1881); J. Robertson, 'Scottish Abbeys and Cathedrals,' in *Quarterly Review* (1849), and *Statuta Ecclesiæ Scoticanæ* (1866); Cosmo Innes, *Origines Parochiales* (3 vols., 1850-55); M. E. Walcott, *Ancient Church of Scotland* (1874), with a list of 136 authorities; A. P. Stanley, *Lectures on the History of the Church of Scotland* (1872); D. Laing's edition of the *Works of John Knox* (6 vols., 1846-64); T. M'Crie, *Lives of Knox and Melville* (1812-19; new ed. 1855); J. Spottiswood, *History of the Church and State of Scotland* (1655; best ed., 3 vols., 1847-51); G. Cook, *History of the Reformation in Scotland* (3 vols., 1811), and *History of the Church of Scotland* (3 vols., 1815); H. Scott, *Fasti Ecclesiæ Scoticanæ* (6 vols., 1866-70); G. Grub, *Ecclesiastical History of Scotland* (4 vols., 1861); J. Cunningham, *Church History of Scotland* (1863; new ed. 1882); and other works cited in our articles on MELROSE, DEER, MAY, PLUSCARDEN, etc.

The FREE CHURCH OF SCOTLAND is the name assumed by the party which in 1843 withdrew from the Established Church and formed themselves into a separate religious body. From the first establishment of the Church after the Reformation there had been a constant tendency on the part of some churchmen to claim that the Church was independent of the State, notwithstanding—nay, as some affirmed, even in consequence of—her establishment. And although the Revolution settlement appeared to give less ground for this claim than did the statutes of James I., the Westminster Confession contains the assertion that 'the Lord Jesus, as King and Head of His Church, hath therein appointed a government in the hand of church officers distinct from the civil magistrate.' It was a dispute regarding this claim that led to the Disruption of 1843, for the proper understanding of which it is necessary to go back to a point ten years previous to that event. The system of patronage, after being twice abolished by Parliament—in 1649 and 1690—was restored by the Act of 1712. According to this statute a presbytery was bound to ordain or induct to a vacant parish the qualified presentee of the patron, the call of the people being regarded as a mere form. The Evangelical party in the Church 'had always held it as a principle that the Church could not, without sin, act under any system of patronage which was subversive of the congregational call;' and that party, having now become the majority, passed in 1834 an act called the Veto Act, according to which no minister was to be intruded on a parish contrary to the will of the people.

One famous case arising therefrom has been fully noticed in our article on AUCHTERARDER; another was the Stewarton case, which arose out of the Chapel Act, passed by the same Assembly,

and by the same party. According to that act, districts in connection with 'chapels of ease' were to be erected into parishes *quoad sacra*, and their ministers to acquire the status of members of presbytery. Such a parish was to be disjoined from the parish of Stewarton in 1840, when certain of the heritors applied for an interdict, which was granted, although the case was not decided by the Court of Session till January 1843. The non-intrusion party held the action of the civil courts in this case to be the most violent attack which had yet been made upon the Church, the foundation principle of which was Presbyterian—that all ministers are equal—and were prepared to accept an adverse decision as alone sufficient to drive them from the Church. In 1842 the party passed their 'Claim, Declaration, and Protest,' which set forth their interpretation of the Church's constitutional principles concerning the headship of Christ, the various encroachments on her rights and liberties by the civil courts; the impossibility, consistently with her duty to Christ the Head, of submitting to the civil supremacy which had been assumed, and the necessity she would be under, if redress were denied, of withdrawing from her connection with the State. Matters were supposed to be made worse than ever by the decision of the House of Lords (August 1842), confirming on appeal that of the Court of Session in the second Auchterarder case. By this second decision it was declared that the obligation of the presbytery to 'receive and admit' was a civil obligation, the violation of which was to be regarded and punished as a civil offence. The party held that the conditions produced by this new interpretation of the relation existing between the Church and the State (with which they always identified the civil courts, while the other party always regarded these as merely holding the legal balance between the Church and the State, and between different parties in the Church) were such that the Church could not fulfil them consistently with her principles. The crisis was produced by the decision in the Stewarton case (January 1843), and by the refusal of the Government (January) to take the Claim of Right into consideration, and the vote of the House of Commons (March) to the same effect. When the General Assembly met in May, the Moderator, Dr Welsh, in his own name and that of 203 other members, read a protest, and the whole party withdrew and constituted themselves the Assembly of the Free Church, with Dr Chalmers as moderator. In all, 451 ministers adhered to the Protest, and resigned their livings; whilst £232,347 was contributed for the support of the Free Church during the sitting of its first Assembly. The maintenance of all the existing missions of the Establishment was boldly undertaken by the Free Church, whose organisation was finally completed by the adoption of the Sustentation Fund. Negotiations for a union with the United Presbyterian Church were abandoned in 1873, on account of the disinclination of a minority of the Free Church to modify its profession of the Establishment doctrine. The majority of the Reformed Presbyterian Church was received into the Free Church in May 1876. The Free Church has 1104 ministers and upwards of 300,000 members and adherents. See Innes's *Law of Creeds in Scotland* (Edinb. 1867); Buchanan's *Ten Years' Conflict* (Edinb., new ed., 1852); Brown's *Annals of the Disruption* (Edinb. 1876); Hanna's *Memoirs of Dr Chalmers* (Edinb. 1854): on the other side, Bryce's *Ten Years of the Church of Scotland* (1850); *The Church of Scotland and the Free Church, their Relation*, etc., by Veritas (Glasg. 1870); *Memoir of Dr N. Macleod* (Lond. 1876).

United Presbyterian Church.—The foundation of this Church was laid in the Secession Church, which was formed when Ebenezer Erskine and his associates, who had been deposed in 1733, were finally ejected from their churches in 1740. In 1745 the Secession, which then numbered 46 congregations, formed itself into a synod; but the prosperity of the Church was greatly hindered by a controversy which arose regarding the lawfulness of taking the burgess oath; and a division took place (1747) into the Associate Synod, popularly known as the Burghers, because they allowed their members to take the burgess oath, and the General Associate Synod, or Anti-Burghers, who objected to it. These two sects were again subdivided into four—the former (1799) into the Old Light (or Constitutional party) and New Light Burghers; the latter (1806) into the Old Light and New Light Anti-Burghers. It was the New Light sections of the two parties which united in 1820 to form the United Secession, while the Old Light sections united (1842) as the Original Seceders. Meantime, in 1752, another secession had taken place from the Established Church. The presbytery of Dunfermline had refused to induct a minister who had been presented (1749) to the parish of Inverkeithing, and against whose settlement the majority of the parishioners had protested. The General Assembly (1752) enjoined the presbytery to proceed with the induction, but six ministers, including the Rev. T. Gillespie of Carnock, absented themselves, whereupon Gillespie was deposed. In 1761, he and Mr Boston of Jedburgh, and Mr Collier of Colinsburgh, formed themselves into a presbytery for the purpose of 'giving relief from the yoke of patronage and the tyranny of the Church courts;' hence the Church thus founded was called the Relief Church. By its union with the United Secession in 1847 was formed the United Presbyterian Church. Other schemes of union have since been inaugurated, with more or less of success. In 1863,

stimulated by movements in the colonies, a great 'union movement' was begun, to unite the four chief nonconforming bodies in Scotland—the Free Church, the Reformed Presbyterians, the Original Secession, and the United Presbyterian Church. The union between the Free Church and the Reformed Presbyterians was consummated in 1878. That between the Free Church and the United Presbyterian Church is at present postponed, the great obstruction being the 'Voluntary' principle held by the latter. There are 558 congregations, 594 ministers, and 178,195 members.

Roman Catholics.—At the Reformation the Roman Catholic form of religion was completely crushed out except in the remote Highlands. It was long till the priests ventured to show themselves, much less perform their office, except under the protection of some powerful chief. The increase in the number of Roman Catholics in the country in recent times is in great measure due to the influx of Irish immigrants. The old hierarchy ended with James Betoun, Archbishop of Glasgow, who died at Paris in 1603. The clergy in Scotland were first re-incorporated into a missionary body in 1653. They were governed by Prefects-Apostolic till 1694, when a Vicariate-Apostolic was established. This arrangement continued till 1878, when the hierarchy was re-established. At present there are 2 archbishops (St Andrews and Edinburgh, and Glasgow), 4 bishops (Aberdeen, Dunkeld, Galloway, and Argyll and the Isles), 324 priests; 305 churches, chapels, and stations; 35 convents, colleges, and other institutions; 2940 schools; and a Roman Catholic population estimated at 321,000.

The Episcopal Church.—The Jacobite rising of 1745 was a death-blow to the Episcopal Church of the time. An Act of Parliament was passed in 1746, by which any clergyman of that Church exercising his functions without registering his Letters of Orders, taking the oaths prescribed by law, and praying for King George and the royal family by name, was for the first offence to be imprisoned for six months, and for the second to be transported for life. Laymen attending Episcopal worship were to be fined five pounds for the first offence, and for the second to be imprisoned two years and be deprived of all political privileges. A still more rigorous statute was passed in 1748, and although the persecution gradually abated as years went on, especially after the accession of George III., the statutes had done their work; and before they were repealed, the congregations had been reduced to less than forty. The change came on the death of Prince Charles Edward Stewart (1788), when the bishops agreed to pray for King George and the royal family by name. The Relief Bill was passed in 1792. There are at present 7 bishops; 267 clergy; 294 churches, private chapels, and mission stations; 91 schools; and 84,664 members.

The Baptists have existed as a denomination in Scotland since 1750, or, according to another authority, only since 1765, when a noted Baptist preacher, Archibald Maclean, was labouring in Edinburgh. The two brothers Robert and James Haldane, who began to act as lay preachers in 1796, adopted the Baptist creed in the latter part of their career, and did much by their enthusiasm and energy to strengthen the sect. There are 89 congregations, 80 pastors, and 8643 communicants.

Congregationalists is the proper name of the sect otherwise called Independents. The latter name was assumed in the apology published in England in 1644, but finding that it was also adopted by others with whose tenets they had no sympathy, they discarded it for the name of Congregational Brethren. Their principles were first brought to Scotland by Cromwell's soldiers, but made little headway till the time of Glass, who, in his work published in 1729, advocated the principles of the English Congregationalists, and the old Scots Independents were founded by Dale. The next impetus to Congregationalism was given by the revival, under James Haldane and John Aikman, begun in 1797. Before 1807, by the zeal of various itinerant preachers, 85 congregations had been formed and pastors ordained. There are 86 congregations.

Evangelical Union.—This denomination had no existence till 1841. In that year Rev. James Morrison, minister of the United Secession Church at Kilmarnock, was deposed for heresy, chiefly for teaching the universality of the atonement, and the ability of man to believe the Gospel. His father, Robert Morrison (Bathgate), was deposed in 1842, and A. C. Rutherford (Falkirk) and John Guthrie (Kendal) in 1843—all for holding similar opinions. These men, and a number of laymen, then met at Kilmarnock, and formed the Evangelical Union. In Scotland there are 86 congregations.

The Glassites are a sect who derive their name from John Glass, a minister of the Established Church at Tealing in Forfarshire, who, for teaching doctrine differing from that of the Church regarding the kingdom of Christ, was deposed in 1730. They spread to England and America, where they received the name of Sandemanians, from Robert Sandeman, Glass's son-in-law. They hold the Voluntary principle, and the independence of each congregation. The number of congregations and members is now extremely small.

The METHODISTS are a sect which was formed by John Wesley and some of his friends at Oxford in 1738. Wesley visited Scotland in 1751; and in 1767 there were 468 members in the country. There are at present—ministers, 43; lay preachers, 99; members, 6000; communicants, 1000; besides about 500 Primitive Methodists.

The CATHOLIC APOSTOLIC CHURCH was founded by Edward Irving (hence the popular name of Irvingites), who was expelled from the Church of Scotland for heresy in 1833. In 1835 there were 7 congregations in London, and the sect began to exist in Scotland. There are at present 13 churches.

XVIII. SCOTTISH LANGUAGE AND LITERATURE.

By the late JOHN M. ROSS, LL.D., Editor of the *Globe Encyclopædia*.

THE 'Scottish language' properly means the Gaelic dialect of Celtic used by the Scots after their settlement in North Britain among the Picts; and down to the 15th century the phrase *lingua Scotica* never denoted anything else. During the 15th century the recognition of the Irish origin of Gaelic led to its being also called *lingua Hibernica*, or, in the vernacular, *Yrishe* or *Ersch* (mod. *Erse*). Long before this, however, the name 'Scottish' had been applied to the whole people of Scotland, Teutonic and Celtic alike; and as the Teutonic became more and more the dominant race, the term 'Scottish' came in time to be applied to the Anglic dialect of the Lowlands. This transference of name was all the more easily made that the lapse of years and the effects of political strife had thoroughly alienated the Angles of Lothian from their brethren of Durham and York. The first native writer who called the dialect of the Lowlands 'Scottish' was Gawin Douglas in the year 1516, though it had been so designated as early as 1498 by Don Pedro de Ayala, the Spanish pro-notary at the court of James IV., in a letter to his sovereigns, Ferdinand and Isabella. Before the close of the 16th century this use or abuse of the term had become universal in the Lowlands, and has ever since been recognised in England.

This article is strictly confined to a notice of that Anglic dialect commonly designated 'Lowland Scotch.' To understand its origin it is necessary to remember that till the middle of the 10th century the kingdom of Scotland embraced no territory south of the Forth. Strathclyde was a Cymric principality, and the Earldom of Lothian was part of the English kingdom of Northumbria. This earldom, which included the whole south-east of the present kingdom of Scotland from Liddesdale to Stirling, passed by grant to the Scottish kings in 975, who held it on the same tenure as the Northumbrian earls; and thus the Anglic dialect obtained a footing within the boundaries of the Scottish kingdom. In the 11th century a powerful impetus was given to the spread of English by Margaret, sister of Eádgar Ætheling, and wife of Malcolm Ceannmor. Her own dialect would, of course, be Wessex or Southern English, but the neighbourhood of Lothian, and the long exile of Malcolm in Northumbria, would irresistibly determine the form of English that would be adopted in Scotland. The insecure and fluctuating rule of the Norsemen along the north-east coast, from Caithness to the Firth of Tay, during the 9th and 10th centuries, is sufficient to account for those local peculiarities of diction which lend a curious flavour to the sub-dialects of Buchan and Forfar, but in no way diminish their right to be considered the legitimate offspring of an English mother. In fact, the majority of these peculiarities are more attributable to Celtic than to Scandinavian influences.

Of the earlier history of the Anglic dialect north of the Tweed we are wholly ignorant. How it grew and spread, what obstacles it encountered, and in what ways it was modified, we can only conjecture. This arises from the paucity, one might almost say the total absence, of literary monuments. The inscription upon the Ruthwell Cross in Dumfriesshire (7th century), and some words interspersed in the Latin charters and laws of David, William the Lyon, and their successors, constitute the entire remains of this speech between the 7th and the 14th centuries. These, however, are sufficient to prove that it approximated in its grammatical forms to the Scandinavian and Frisian rather than to the Saxon of Wessex. The same remark holds good of the whole Anglic dialect of Northumbria.

Between the 11th and the 14th centuries the Anglic tongue steadily extended itself in Scotland at the expense of the Celtic dialects of the south-west and the north, but it does not appear to have become the recognised vernacular of the entire Lowland community till at least the reign of Alexander III. A curious and hitherto unnoticed passage in *Blind Harry* (Bk. vi.),

in which Wallace is mockingly saluted in bad Gaelic by an English soldier of the Lanark garrison, might almost warrant the inference that Celtic was still prevalent in Strathclyde in the days of the hero. The great struggle for independence (1297-1314), which created the Scottish nation, was carried on by the Scoto-Anglic and Scoto-Norman population, the Celtic clans ranking mainly on the English side; and this fact in all probability finally secured the supremacy of the Teutonic speech. No sooner was the long-deferred unity or nationality of Scotland attained than an Anglic literature sprang into existence, which at one time promised to rival, if not to surpass, that of the south in the splendour and strength of its poetry.

'From the 14th century onward,' says Dr J. A. H. Murray, 'Scotland presents a full series of writers in the Northern dialect, which as spoken and written in this country may be conveniently divided into THREE periods. The first or EARLY period, during which the *literary* use of this dialect was common to Scotland, with England north of the Humber, extends from the date of the earliest specimens to the middle or last quarter of the 15th century. The second or MIDDLE period, during which the literary use of the northern dialect was confined to Scotland (the midland dialect having supplanted it in England), extends from the close of the 15th century to the time of the Union. The third or MODERN period, during which the northern dialect has ceased to be the language of general literature in Scotland also, though surviving as the speech of the people and the language of popular poetry, extends from the union of the kingdoms to the present day.'

The language of the first of these periods differs in no essential respect from that which was current in England as far south as the Trent. A comparison of the literary remains of both districts proves (1.) that they used to a large extent the same words and the same forms of words; *e.g.*, *mirk*, *byggin*, *gar*, *stane*, *ald*, *cald*, *wrang*, *hyng*, etc.; (2.) the same grammatical inflections, as seen (*a*) in irregular plurals, *e.g.*, *childer*, *kye*, *schone;* (*b*) in the use of the indefinite articles as a numeral; (*c*) in the identity of their demonstratives, and of their verbal forms, *e.g.*, *thow cumis*, *clerkes sayis*, *we that lyves*, *falland*, in the use of the preposition *tyl* for *to*, etc.; (3.) the same orthography, *e.g.*, in the gutteral *gh* (changed in later 'Scotch' into *ch*), in the change of the old English *hw* into *qw*, *qu*, *quh*, and *qwh*. The most famous writers in the vernacular literature of this first period were Barbour, Wyntoun, King James I., Henryson, and Blind Harry. Barbour was by far the greatest of metrical chroniclers, a class of poets who sought to win the ear of an audience, by stirring narrative rather than by imaginative sentiment, and who were a genuine product of the Middle Ages. In his noble rhyme, Barbour narrated the heroic struggle of the Bruce with a vivid minuteness of detail that has engraven itself indelibly on the national memory. Wyntoun was a humbler artist, who undertook to recite in verse the History of Scotland, and thought it necessary to start from the creation of Adam. In the *Kingis Quhair* of James the Anglic poetry of Scotland underwent its earliest literary change. The simple unadorned semi-prosaic style of the chronicles gave place to a delicacy and refinement of imaginative feeling, a richness and elegance of diction, and a certain artistic ambition in the choice of verse. The great influence of Chaucer on the Scottish poets of the next period was perhaps due to the prince whose long captivity in England was brightened by the charms of love and the delights of literature. Henryson was the finest poetic genius of the 15th century, and not even Chaucer himself has surpassed the author of the *Testament of Cresseid* in melody of verse or tenderness of sentiment. Blind Harry is the rudest of minstrels, yet his fierce and prejudiced verse shows us, only too well, the pernicious effect of those desperate attempts on the part of the English kings to overthrow the liberties of a proud and obdurate nation. The only relic of *prose* literature in this period is the *Craft of Deyng*, but for linguistic purposes the old Scottish laws are of great value. Latin authors like Fordun and his continuator do not come within the scope of this article.

The second period of the Anglic literature of Scotland is that in which it becomes distinctively *national*. The genius of Chaucer had raised the East Midland dialect of English to the rank of a classic or standard for his countrymen. As a consequence of this, the northern dialect gradually 'ceased to be employed for literary purposes' in England, and 'sank into the position of a local and rustic patois,' while in Scotland it grew and flourished as the language of the court, literature, and law. The differences between it and the dialect of the first period are chiefly these: (1.) the spelling of many words is changed, chiefly through Gaelic influence —*e.g.*, the diphthongs, *ai*, *ei*, *oi*, begin to be regarded as simple long *a*, *e*, *o*, and to lose their fine diphthongal force, to which is largely due the mean accent of the modern Scotch; (2.) the introduction of French words which followed the French alliance—*e.g.*, *gigot*, *ashet*, *tasse*, *fulzie*, *glaur*, *porte*, *gein*, *grosel* (mod. *grozet*), *dour*, *douce*, *caussey*, *dule*, *faschis;* (3.) the influence of the revival of learning which for a time flooded the written language with Latin terms—*amene*, *preclair*, *celical*, *humile*, *superne*, *eterne*, *matutine*, *sempitern*, *fructuous*, *melifluate*, *aureate*, *pulchritude*, *celsitude*, etc.—terms that, not finding a reception among the people, soon died out. It is, however, to be noted that in the latter part of this second period the natural growth of the

Anglic dialect in Scotland received a check through the influence of the Reformation movement. Mr Murray points out that 'there was no translation of the Scriptures into the northern dialect; for the first forty years of the Reformation movement these and other books used by the adherents of the new faith had to be obtained from England.' As early as the time of Lyndsay we see traces of southern English showing themselves; and it becomes more and more marked in the reign of Mary—Knox himself using, with the greatest licence, the English forms of spelling.

The literature of the second period is in some departments peculiarly rich. Dunbar, Douglas, and Lyndsay, with whom it opens, are names that would lend lustre to any age. When their bright lamps began to shine in the northern sky, England had not even a farthing rushlight to make its darkness visible. The author of the *Seven Deidly Synnis*, the *Thrissill and the Rois*, and the *Goldyn Targe*, well deserved to be called the 'darling of the Scottish muses;' while the diffuse loveliness of Douglas bears witness to the power of the Chaucerian charm. Lyndsay is chiefly memorable for his fierce and life-long battle with the priests, which secured for his satiric verse a popularity that lasted far on into the 18th century. Among the lesser lights of the time were the Earl of Glencairn, Henry Balnaves, John Davidson, Sir Richard Maitland, Bannatyne, Alexander Scott, Alexander Hume, and Robert Semple. Prose is powerfully represented by the *Traduction* of Bellenden, the *Complaynt of Scotland*, and the *History of the Reformation in Scotland*, by Knox. The names of Buchanan and Melville can never be forgotten, though their literary genius found expression almost wholly in Latin.

With the accession of James to the English throne, the Anglic dialect of Scotland enters upon its third and final phase. This may be described as a period of gradual but unceasing decay. One genuine characteristic disappeared after another, till by the middle of the 18th century the language had become, from a linguistic point of view, a mere *jargon*. The union of the crowns, still more the union of the Parliaments, was fatal to its organic preservation. During the 17th century it maintained, though with ever-diminishing tenacity, its hold upon the law courts, the schools, and the churches, but after the Revolution its fate was sealed. Southern English took possession of the schools, and in spite of the temporary reaction that followed the union of the Parliaments, steadily extended its authority, till it embraced nearly every kind of literature. As a *spoken* tongue 'Scotch' was still in force, but the accessions which it constantly received from its southern sister completely destroyed its dialectic integrity. When we analyse the examples furnished by the literature of the 18th and 19th centuries, we find that they present an incoherent medley of dissimilar forms from which no principle can be extracted. Yet, strange as it may seem, in this forlorn and ruined shape the Anglic dialect of Scotland has been the vehicle of some of the rarest literature the world has seen. Ramsay and Ferguson are not unlikely to fade into something like oblivion, but the verse of Burns is as sure of immortality as anything that has come from the heart of man. He and other gifted spirits, such as the Baroness Nairne, Hogg, Tannahill, Cunningham, Motherwell, with numerous humble but genuine lyrists, have sung so copiously and sweetly of the land which gave them birth; its scenery in all its aspects; its people in all their ways, that Scotsmen may almost be forgiven if a certain pride mingles with their patriotism.

Prose is brilliantly represented by Scott, Galt, and later writers, but in general it forms only a part of their composition. The use of 'Scotch' in fiction or verse may last for some time longer, but the dialect is destined to perish as a living speech, and must therefore, in due time, disappear from literature. It may perhaps share the fate of Latin, and be most carefully studied after it is dead. See David Irving's *History of Scottish Poetry* (1861); Dr James A. H. Murray's Historical Introduction to his Essay on 'The Dialect of the Southern Counties of Scotland,' published in the *Transactions of the Philological Society* (1873); Dr Ross' *Early Scottish History and Literature* (1884); and the publications of the Early Scottish Text Society (1884, etc.).

XIX. GAELIC LANGUAGE AND LITERATURE.

By the Rev. ARCHIBALD CLERK, LL.D., Editor and Translator of *Ossian*.

CELTIC was wholly neglected by philologists until a very recent period. A Welshman, Edward Lhuyd (1670-1709), was the first to treat it scientifically. Sir W. Jones (*c.* 1780) started the theory that it was allied to Sanscrit, and to the general family of Indo-European tongues; and Dr Prichard (1831) fully proved the correctness of this theory. But it is from foreign, and especially German scholars, that it has received the critical examination which defines its position on the Aryan tree, and explains its structure on general linguistic laws.

Foremost among these ranks J. K. Zeuss, who in 1853 published his *Grammatica Celtica*, a truly noble monument of indomitable perseverance and of profound scholarship. Ebel, Windisch, Rhys, and Whitely Stokes have thrown much additional light on the subject; but for many years to come the *Grammatica Celtica* will form the chief quarry from which the Celtic student must draw his building materials.

For the last thirty years the language has received a degree of attention which forms a striking contrast to the contempt with which it had been treated during centuries. It has now its acknowledged place in every able work on philology. A French periodical—*Revue Celtique*—has for several years been wholly devoted to its elucidation. It forms the subject of lectures in various German Universities. In Paris, Oxford, and Dublin, Celtic Chairs have been founded; and Scotland has at length rolled away the reproach under which it lay for its strange indifference to a language which had so many peculiar claims on its attention. In 1883 a Chair was founded in the University of Edinburgh for the 'Study of Celtic Comparative Philology,' etc., etc.—a good work almost wholly due to the energy of Professor Blackie; and Mr M'Kinnon, its first occupant, is fitted by high qualifications to make amends for the lateness of his appointment.

The Celtic language is divided into two main branches, now termed Brythonic and Goidelic, but formerly Cymric (or Welsh) and Gaelic: and in this article we retain the old familiar names. The Cymric was a living language in Cornwall until the middle of the last century. It is still spoken in Brittany—the Armoric dialect—and also in Wales, where it boasts of a rich literature, both ancient and modern.

But it is of the Gaelic branch we are to treat. It is divided into three sub-classes—the Manx, the Irish, and the Scottish Gaelic. Of the first, little need be said. It is confined to the Isle of Man, has no old records, has adopted the phonetic mode of spelling, uses all the letters of the English alphabet, and is likely to be soon swallowed up by English.

The Irish, on the other hand, possesses a store of ancient literary treasures of which any nation might be proud. During the sixth, seventh, eighth, and part of the ninth centuries, when Europe generally was in such wild turmoil after the breaking up of the great Roman Empire, the remote island of Ireland remained in peace. At that time several truly great men sprang up in it—men of high scholarship, and of fervent, enlightened, Christian zeal, who did great and glorious work in imparting the blessings of the Gospel to the heathen. From Iona in the West, they Christianised the North of Scotland and of England. They travelled to the shores of the Baltic, and even to Iceland. They founded monasteries and colleges in various parts of Germany, Switzerland, and Italy; and many proofs of their scholarship and zeal are still to be seen in the Libraries of Würtzburg, Milan, St Gall, Brussels, and other seats of Continental learning. The laws, civil and ecclesiastical, which these men and their contemporaries drew up for their own country—at least as early as the eighth century—are published under the title of the 'Brehon Laws of Ireland,' and show an advanced state of civilisation far beyond that of any neighbouring country. According to the able work of Professor Eugene O'Curry (1861), there are masses of unpublished MSS. in the library of Trinity College, Dublin, as well as in other libraries, British and Continental. They treat of everything which can interest a nation—religion, education, commerce, warfare, music, poetry, etc., etc.; and one thing remarkable is, that, in all the laws, the foremost honour is assigned to learning. The *Ollamh*, or 'Doctor of Laws,' took precedence of the highest nobility.

The Irish had a very ancient mode of writing known as the *Ogham*, similar to the Runic, and consisting entirely of straight lines variously arranged. It is believed to have belonged to the Druidical period; but comparatively little is known with certainty regarding it. At the introduction of Christianity—in the fifth century—the Roman alphabet was adopted; but as the form of the letters used at that time was very different from that now in use, the English reader finds considerable difficulty in mastering the Irish character. Both Irish and Scottish Gaelic have limited themselves to eighteen letters, rejecting *j*, *k*, *q*, *v*, *w*, *x*, *y*, and *z*. Gaelic has suffered much from phonetic decay. Of old it used three genders; but in modern days it has discarded the neuter. It had many terminational inflections; but these have, in many instances, disappeared, though not so completely as in English. They have, however, left traces of their existence unexampled in other languages, and known as *eclipsis* and *aspiration*. These terms mean changes produced by a word on the beginning of that which immediately follows it, so that the language is declined both by initial and terminational inflections. Another peculiarity is, that according as the last vowel in any syllable of a word is broad or small, the first in the next syllable must conform; thus, in *athair* = 'father,' the second *a* is entirely mute, and serves no known purpose. This rule holds good in some Turanian dialects, but is unknown to the Aryan, except in Gaelic; and, while frequently condemned as useless and cumbrous, it is still followed by Gaelic writers. The Gaelic is generally denounced by English people as extremely harsh, and even unpronouncable. But it is strange that its aspirations of

ch, *gh*, etc., so strongly objected to, meet with all favour both in Greek and in German, as do its deepest nasal sounds in French. It is to be regretted that the Gaelic is rapidly casting away its stronger and more consonantal forms, and thus becoming more vocalic day by day.

The Scottish Gaelic is said by many to be so very similar to the Irish, as to be undeserving the name of a separate dialect. But, just as the peoples who respectively speak them, although originally of the same race, have so widely diverged from each other in character, that no one will deny that they now form different families, so it is in regard to their language. There are many differences between the Gaelic of the two countries, alike in grammar and vocabulary—not incidental, but systematic; and the Scottish is unquestionably a dialect of the original Gaelic. Its stock of MSS. is inconsiderable, compared with that of the Irish. There are several in the Advocates Library, Edinburgh, ranging from the twelfth to the sixteenth century, which are interesting, but not very important. The *Book of Deer* (*circa* 1125), though written in Scotland, is more Irish than Scottish; but the *Book of the Dean of Lismore*, compiled between 1512 and 1530, and published by the Rev. Dr MacLauchlan in 1862, is undeniably Scottish. It consists almost entirely of historical ballads and songs, taken down by the collector from oral recitation. Nine of these ballads are ascribed to Ossian; and as many as forty-seven other authors are mentioned, some of them being nobles of the land. The spelling is entirely phonetic, and differs in all respects from the spelling of Bishop Carswell, who wrote in 1567. It has not yet been fully explained in any respect, but it is important in proving the wide difference between Irish and Scottish Gaelic—or, it might be said, between the ecclesiastic and vernacular. It also proves that, 350 years ago as now, Ossian was deemed the 'King of Song,' and that poetry was extensively cultivated in the Western Highlands; whilst the fact that several ballads, differing but slightly from those of the Dean, have at the present day been collected from recitation in various parts of the Highlands, shows the remarkable fidelity of tradition among a people destitute of books.

The first book *printed* in Gaelic was a translation of Knox's *Liturgy* by Bishop Carswell of Argyll in 1567. Strange to say, for eighty years after nothing further was printed, except a translation of Calvin's *Catechism*. About that time translations of the Psalter began to appear, and soon thereafter of other portions of the Scriptures; but till the close of the eighteenth century there was no complete version of the Gaelic Bible. From that date downwards many works have appeared.

The Ossianic controversy, which raged so fiercely for many years, must be very briefly sketched here. In 1760 James Macpherson published an English translation of what he called the Gaelic poems of 'Ossian.' He was accused of forgery. He promptly advertised that the Gaelic MSS. were to be seen at his publishers, Beckett & De Hondt, London. They lay there for a year, but neither friend nor foe examined them. That he gathered various MSS. in the Highlands is certain. The strong point against him, however, is, that these were never published. The Gaelic which was published (1807) was in his own handwriting. Various editions have since appeared, the most complete of which by far is that by the Rev. A. Clerk, LL.D., minister of Kilmallie (Edinb. 1870).

As to the genuineness, it should be known, that Mr Skene, the ablest authority on Celtic antiquities in Britain, considers the 'Fragments'—sixteen pieces published in 1797—to be entirely genuine, and further, that several other short portions have, by unexceptionable testimony, been proved to have existed before Macpherson was born. The most rational conclusion seems to be, that the poems of 'Ossian' contain genuine remains of the old heroic ballads of the Gael, linked together and probably modified here and there by Macpherson, and there is no stronger reason to object to their authenticity than to that of Homer, the *Edda*, or the *Nibelungenlied*. Whoever the author was, these poems are Gaelic. They undoubtedly have an air of antiquity about them in many respects, especially in the pure objectivity with which external nature is described. They are remarkable both for sublimity and tenderness, and they have exercised a powerful influence on the tone and style of European literature down to the present day (*vide* Matthew Arnold's *Celtic Studies*).

One other remark must be made. Immediately after the appearance of 'Ossian,' several other fragments of Gaelic poetry were published, chief among which are the *Sean Dàna*, or *Ancient Lays*, by Dr Smith, minister of Campbeltown. These, though destitute of the depth and strength of Ossian, are much more beautiful in various respects; and thus, in whatever manner Macpherson may be disposed of, the fact that the old Gaelic bards composed poetry of the highest order remains untouched.

During the last two hundred and fifty years a great quantity of lyric poetry has been composed by Highland bards, which, though destitute of the Titanic strength of the Fingalian lays, displays much beauty and varied power. Mary Macleod (1630) shows true Pindaric ardour. John Macdonald (1670), Gaelic laureate to Charles II., is still a great favourite with his countrymen. Alexander Macdonald (1701-80), the 'Tyrtæus of the Highlands,' while too fond

of 'the blood and iron' vein, is still a true child of nature, describing her alike in her calmer and fiercer moods with remarkable truth and vividness. Duncan Bàn Mac Intyre (1724-1812) has been called the 'Burns of the Highlands,' and, though ranking far beneath the Ayrshire bard alike in clearness and depth, is truly a sweet singer of all that pertains to pure affection; and is, I believe, unrivalled in his glowing descriptions of the great Highland pastime of 'chasing the deer.' He had a passionate love for mountains and stags. He ranks highest among modern bards, and his works are in ever-increasing demand. One other name deserves to be classed with his—that of William Ross (1762-90), who for genuine feeling and happy choice of terms deserves a high rank in any literature. Dugald Buchanan (1716-68) is by far the ablest of the religious poets; and James Macgregor (1800) holds the second place. Scores of others have been and still are 'warbling their native wood-notes wild.' There are about a hundred thousand lines of modern Gaelic poetry, proving that the people are 'children of music and song.' But with such exuberance of poetic fruitfulness the scarcity of prose composition is in striking contrast. In truth, almost the only name worth mentioning in this department is that of Dr Norman Macleod (1783-1862), minister of St Columba, Glasgow. He may justly be called the father of modern Gaelic culture, and his thorough mastery of the language shows it to possess powers which it does not manifest in any other hands. Professor Blackie ranks one composition of his, for 'graceful simplicity and profound pathos,' among the foremost known in any language. His collected works, *Caraid nan Gäidheal* ('The Highlander's Friend'), have been edited by the Rev. Dr Clerk (Glasgow, 1865). An interesting collection of Gaelic proverbs has been published by Sheriff Nicolson; and Mr J. F. Campbell, of Islay, in his great work, *West Highland Tales*, and in his *Leabhar na Féinne* ('Book of the Fingalians'), has done more for Gaelic literature, in the department of ancient tales and lays, than any man living. There is a grammar by Dr Stewart and another by Mr Munro. There are dictionaries—one by Armstrong (1825), one by the Highland Society (1828), and one by Drs Macleod and Dewar (1845)—but the best of them all is very defective; and the Professor of Celtic has needful, though weary, work before him in enlarging and correcting both grammars and dictionaries.

The Gaelic language is rich in words expressive of all the emotions of the heart, and is thus a language of love and devotion. It is rich, too, in terms descriptive of nature's external aspect, discriminating between every shade and colour, and between forms which to an ordinary eye present the appearance of sameness. Thus it is well fitted for descriptive poetry, and the significant names which it has left in many lands where it was spoken of old fully attest its topographical power; but it is almost wholly without terms of science, mental or physical; nor is it in the least of a plastic nature, to adapt itself to the onward progress and rapid changes of the modern world. Again, throughout the poetry, not only of Ireland and Scotland, but also of Wales, there runs a tone of deep sorrow, of 'piercing sadness.'

These remarks on the language are a key to the character of the people who formed it, and who in small numbers speak it still. Of these there are about 2,000,000 in Ireland, upwards of 300,000 in Scotland, and several thousands in North America. Generally they know little of the history of their far-off ancestors, who, before Christ was born, ruled over all South-Western Europe, and had settlements also in Asia. But the shadow of a great and constant decline seems to darken their spirits, so that they are ever wailing over departed glory, instead of conquering the realities of the present, or shaping out a prosperous future. Full of sensibility, tender in feeling, ardent in passion, and fearless in spirit—witness the records of the British army—they yet lack the steadfast, patient, unyielding powers which alone secure abiding success. Thus, they have been for ages driven into ever-narrowing limits by Roman and Saxon; and fierce as are the spasmodic efforts occasionally made by them to reassert something of their ancient sway, the time, according to all appearance, must soon arrive, when throughout Ireland and Scotland they will be as wholly absorbed as, long ago, in England and France.

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